

Formosa Plastics Corporation, Texas 201 Formosa Drive • P.O. Box 700

Point Comfort, TX 77978 Telephone: 361-987-7000

July 30, 2019

Certified Mail: 7018 2290 0000 0529 6142 Air Section Manager, Region 14 Texas Commission Environmental Quality 6300 Ocean Drive, Suite 1200 Corpus Christi, Texas 78412

RE: Formosa Plastics Corporation, Texas

TCEQ Air Quality Account No. CB-0038-Q Second Quarter 2019 SUMMA Canister Report

Dear Air Section Manager:

Per your request, we have enclosed a quarterly summary of results from the Point Comfort SUMMA Canister Monitoring System. The second quarter of 2019 results are shown for each site on the attached tables. Additionally, we have included wind roses generated by the weather sensor on the FTIR or wind direction data from other air monitoring devices for each SUMMA canister sampling date during the second quarter of 2019.

Beginning with the first sample date in the fourth quarter 2003, we have also included average wind speed and wind direction on the tables. This was done at the request of Mr. David Carmichael of the TCEQ Austin office. In addition, at the request of Mr. Carmichael, the following changes have been made to the tables:

The duplicate sample data for all compounds has been removed from the VOC Canister Analysis Tables;

The averaged duplicate sample data was replaced with only the routine sample data in the VOC Canister Analysis Tables; and

An additional VOC Canister Analysis Table was created for the duplicate samples data. This was done so that the relative percent difference (RPD) could be calculated. The calculation for obtaining the RPD is shown in the Duplicate Sample section of the attached Calculation Methodology.

During a telephone conversation with Mr. Vincent Leopold (TCEQ TARA Group) on April 9, 1998, he requested a disk copy of the SUMMA Canister sampling results be included with the quarterly report. Enclosed is an electronic copy of the second quarter 2019 SUMMA Canister Report.





Should you have any questions please contact Vanessa Peppers by e-mail at VanessaP@ftpc.fpcusa.com.

Sincerely,

Rick Crabtree

Vice President/General Manager Formosa Plastics Corporation, Texas

Attachments

cc: Dr. Tracie Phillips

Toxicology Division
Texas Commission on Environmental Quality

P. O. Box 13087

Austin, Texas 78711-3087

Certified Mail: 7018 2290 0000 0529 6159

FORMOSA PLASTICS CORPORATION, TEXAS

SUMMA CANISTER QUARTERLY REPORT

CALCULATION METHODOLOGY

Following is the calculation methodologies used to calculate the Year-To-Date Sum and Year-To-Date Average for the four SUMMA canister sampling sites. Please note, there are two columns associated with each component analyzed. The column titled "Actual" represents the results reported by the independent laboratory contracted to analyze the SUMMA canisters. The column titled "½ Reported LOD (Limit of Detection)" represents either the actual result or one-half the limit of detection reported by the laboratory, as appropriate.

ACTUAL

The following is entered into the column titled "Actual":

Numerical Value - Actual results reported by the independent laboratory when the result is equal to or greater than the limit of detection. The numerical value is used to calculate the year-to-date sum and the year-to date average;

ND (Non Detect) - As reported by the laboratory. The value of "0" is used to calculate the year to date sum and the year-to-date average;

BDL (Below Detection Limit) - Entered when the actual result is less than the reported limit of detection. The value of "0" is used to calculate the year-to-date sum and the year-to-date average;

"*" - Non operational sampling period.

1/2 REPORTED LOD (LIMIT OF DETECTION)

The following is entered into the column titled "1/2 Reported LOD":

Numerical Value - Actual results reported by the independent laboratory when the result is equal to or greater than the limit of detection. The numerical value is used to calculate the year-to-date sum and the year-to-date average;

½ the Reported Limit of Detection - ½ the reported limit of detection when the results are reported as non-detect and when the actual result is below the detection limit (BDL). ½ the reported limit of detection is used to calculate the year-to-date sum and the year-to-date average.

"*" - Non operational sampling period.

FORMOSA PLASTICS CORPORATION, TEXAS

SUMMA CANISTER QUARTERLY REPORT

Limit of Detection (LOD) - Method Detection Limit, Limit of Detection, Reporting Limit, etc... as reported by the independent laboratory conducting the analysis.

DUPLICATE SAMPLES

Beginning with the revised First Quarter 2004 Report, submitted on October 22, 2004, the duplicate samples will be reported discreetly on a separate VOC Canister Analysis Table. This is done so that the duplicate samples can be compared to the routine samples and the Relative Percent Difference (RPD) can be calculated. The RPD is calculated using the following equation:

$$\{(X1-X2)/[(X1+X2)/2]\}$$
 x 100

Mr. David Carmichael provided this equation in his August 20, 2004 e-mail request for changes. Where the duplicate and routine sample indicated "ND", the RPD is reported as "ND". Where the duplicate or routine sample indicated "ND" and the other indicated a concentration greater than ND, the RPD is calculated by using the value entered in the actual concentration column and the value entered in the ½ Reported LOD column.

YEAR-TO-DATE SUM

The year-to-date sum is calculated by taking the sum of all values entered in the column.

YEAR-TO-DATE AVERAGE

The following formula is used to calculate the year-to-date average:

Year-To-Date Sum / (Number of theoretical sample periods - Number of non operational sample periods)

FORMOSA VOC CANISTER ANALYSIS 2nd QUARTER 2019 POINT COMFORT - CITY HALL SITE

Samue Dale Avg.Wind	AVG.WIND	ETH	ETHYLENE	1,3 BU	1,3 BUTADIENE	BEN	BENZENE	O IVNIV	VINVI CHI OBIDE	T CHANGE TAXABLE	10000
DIRECTION	SPEED (mph)	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	Actual 1/2 Benomed I On
(Degrees)		(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(dag)
120	1.1	QN !	0.0500	QN	0.1250	0.1020	0.1020	0.8600	0.8600	6.1100	6.1100
151	0.4	QN Q	0.0500	9	0.1250	0.3820	0.3820	QN	0.0500	QN.	0.0500
921	5.7	2 9	0.0200	QN .	0.1250	0.2210	0.2210	ND	0.0500	0.1760	0.1760
133	4.0	2 2	0.0200	QN 4	0.1250	0.1850	0.1850	ND	0.0500	0.1990	0.1990
107	4.1	2 2	00000	S S	0.1250	ND	0.0500	ND	0.0500	ON	0.0500
138	9.5	8 8	00500	ON A	0.1250	0.3850	0.3850	0.6580	0.6580	0.7690	0.7690
135	09	CIN CIN	00500		0.1250	QN	0.0500	Ð	0.0500	ND	0.0500
155	200	5	0.0500	QN	0.1250	0.2890	0.2890	ND	0.0500	ΩN	0.0500
121	4.5	ON CAN	0.0200	Q !	0.1250	0.1220	0.1220	ND	0.0500	Q.	0.0500
17 10	4:3	ON E	0.0500	QN	0.1250	ND	0.0500	ND	0.0500	0.1020	0.1020
16 9	1.8	QN S	0.0500	ND	0.1250	0.1930	0.1930	0.7720	0.7720	09860	0.9860
8 2	4.0	QN,	0.0500	ND	0.1250	0.1530	0.1530	ND	0.0500	0.1100	0.1100
115	1.3	*	*	*	*	*	*	*	*	*	*
CII ;	4.5	QN	0.0500	ND	0.1250	0.1490	0.1490	Ð	0.0500	S	0.0500
65	2.2	QN	0.0500	ND	0.1250	0.5390	0.5390	2.3200	2,3200	1 2400	0.000
126	7.1	*	*	*	*	*	*	*	*	*	1.2400
88	5.1	QN	0.0500	ND	0.1250	0.4490	0.4490	0.7060	0,70,50	0000	*
343	4.9	0.6490	0.6490	QN	0.1250	0.6530	0.6530	06000	0.000	ON OIL	2.0900
249	1.5	0.6510	0.6510	ND	0.1250	0.3480	0.3480	0.3960	03060	ND 0	0.0200
324	6.2	*	*	*	*	*	*	*	*	W.1230	0.1230
157	4.8	Ð	0.0500	0.275	0.2750	0.1720	0.1720	QN	0.0500	S	00800
321	7.6	Ð	0.0500	ND	0.1250	0.1190	0.1190	Ð	00500	2	0.0500
88	4.5	*	*	*	*	*	*	*	*	ž *	w.co.v.
316	3.0	Q	0.0500	QN	0.1250	0.2070	0.2070	QN	0.0500	CN	0.0500
240	2.7	QN	0.0500	ND	0.1250	0.1750	0.1750	1 5	0.0500	0100	0.0300
102	1.9	QN	0.0500	QN	0.1250	0.2320	0.2320	2 5	0.0500	0.1220	0.1220
235	6.7	ND	0.0500	ND	0.1250	0.1500	0.1500	9	0.0500	2 2	0.0500
15	1.7	ND	0.0500	ND	0.1250	0.2280	0,2280	0.1510	0.0300	0110	0.0300
106	5.9	ND	0.0500	ND	0.1250	0.1090	0.1090	8	0.0500	OLITIO NA	0.2110
334	4.2	Q.	0.0500	ND	0.1250	0.1970	0.1970	Q	00500	2 2	0.0500
118	5.8	ND PD	0.0500	ND	0.1250	0.1010	0.1010	QN	00500	2 2	00500
307	4.4	Ð	0.0500	ND	0.1250	0.1640	0.1640	NO.	0.0500	2 2	0.0500
144	5.2	QQ.	0.0500	ND	0.1250	0.2950	0.2950	Ð	0.0500	2	0.0500
8 :	5.1	QN	0.0500	ND	0.1250	0.2110	0.2110	£	0.0500	E	0.0500
4.7	8.7	0.1080	0.1080	ND	0.1250	0.3230	0.3230	0.4010	0.4010	1.5400	1 \$400
123	5.9	Q.	0.0500	Q.	0.1250	ND	0.0500	Ð	0.0500	2	00500
140	2.2	QZ	0.0500	æ	0.1250	0.2050	0.2050	0.1930	0.1930	£	0.0500
336	5.3	ND	0.0500	ND	0.1250	0.4200	0.4200	0.2920	0.2920	Q	0.0500
197	1:2	*	*	*	*	*	*	*	*	*	*
113	3.2	0.9830	0.9830	QN	0.1250	0.3320	0.3320	0.9570	0.9570	0.1900	0.1900
140	4.7	* ,	*	*	*	*	*	*	*	*	*
140	9.4	* ,	*	*	*	*	*	*	*	*	*
140	3,7	+	* .	*	*	*	*	*	*	*	*
237	3.2	,	*	*	*	*	*	*	*	*	*
100	6.4	•	*	*	*	*	*	4			Ī

FORMOSA VOC CANISTER ANALYSIS 2nd QUARTER 2019 POINT COMFORT - CITY HALL SITE

CTUVI ENE DICHI OBIBE	JCHLORIDE	1/2 Reported LOD	(qdd)	*	4	к	0.4410	0.0303	*		0.1630	0.3010	2000	0.0313	0.0309	0.0302	0.0321	0.6510	0.0010	2.6100	0.0320	0.1750
ETHYLENE	EIHILENE	Actual	(qdd)	*	>	+	0.4410	N N	*	0.000	0.1630	0.3010	ATA.	GNI	ON	ND	QN	0.6510	0.000	2.6100	ON	0.1750
VINVI, CHI ORIDE	TOWING	1/2 Reported LOD	(qdd)	*	*	07700	0.2640	0.0626	*	0.100	0.1020	0.2260	0.0313	00000	0.0309	0.0302	0.1350	0.5110	01240	0.0240	0.0320	0.0629
VINVI	THE PARTY OF THE P	Actual	(add)	*	*	0.2640	0.2040	0.0626	*	0010	0.1020	0.2260	Ę	e de	ON	ON	0.1350	0.5110	01240	OF-1-0	S.	ND
BENZENE		1/2 Reported LOD	(add)	*	*	0.2630	0.2020	0.1530	*	0.1480	0.1180	0.1580	0.0313	0882.0	0.7000	0.1610	0.1040	0.3230	0 1840	0.0300	0.0020	0.1220
BENZ	1	Actual (nph)	(odd)	*	*	0.2630	000000	0.1530	*	0.1480	001.00	0.1580	QN	0.7880	0.1710	0.101.0	0.1040	0.3230	0.1840	Ę	01330	0.1220
ADIENE	OO I F. T. D. D. O. D.	1/2 Reported LOD	(add)	*	*	0.0304	0000	0.0303	*	0.0315		0.0313	0.0313	0.0309	0.0302	0.000	0.0321	0.0356	0.0355	0.0320	0.0620	0.0029
1,3 BUTADIENE	Actual	(bob)	4	+	*	Q.	E.	ON I	*	R	41.	ND	2	Q.	5		UNI	ND	ND	S	CN	O. I
ETHYLENE	1/2 Renorted I OD	(qdd)	н		*	6.6500	2 4100	0014:-	*	0.6110	1 1000	1.1200	1.8600	0.2350	0.3580	1 1300	0001.1	3.3700	2.8500	0.1890	0.6510	
ЕТНУ	Actual	(qdd)	*		*	6.6500	2 4100	1	+	0.6110	1 1200	1.1200	1.8600	0.2350	0.3580	1 1300	00011	3.3700	2.8500	0.1890	0.6510	
AVG.WIND	SPEED (mph)		8.7	2.0	6.9	0.6	8.0	11.0	11.7	5.1	8.0	200	10.3	10.2	6.3	4.5		4.4	5.1	9.4	4.1	
AVG.WIND	DIRECTION	(Degrees)	103	200	83	242	119	115	CII	101	255	101	1.24	113	111	966	300	777	157	136	165	
SAMPLE DATE			4/6/2019	OFOCIAL	4/17/2019	4/18/2019	4/24/2019	4/30/2019	CIOCIOCIA	5/6/2019	5/12/2019	0100/01/5	3/18/2019	5/24/2019	5/30/2019	6/2/5019	0100117	0/11/2019	6/17/2019	6/23/2019	6/29/2019	

	ЕТН	ETHYLENE	1,3 BUT	1,3 BUTADIENE	BEN	BENZENE	VINYI. C	VINYI, CHI, ORIDE	PTHVI BNE	ETHYI ENE DICHI OBIDE
	Antero								The state of the s	ICHTONIDE
	ACIUAL	US Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported I OD
	(qdd)	(qdd)	(pdd)	(qdd)	(qdd)	(qdd)	(qaa)	(hua)	(huu)	(quu)
Year-To-Date Sum	23.8250	25.3750	0.2750	4.9387	10.2140	2277701	10.0504	11 2000	(cdd)	(add)
					21	2111.01	10.0320	11.3898	18.3090	19.5456
Rolling Year Average	0.5069	0.5399	0.0059	0.1051	0.2173	0,777.0	0.2130	0.7473	2000	
						-	0.515.0	6242.0	0.3890	0.4159
Annual Average	1.0726	1.0893	0.0000	0.0733	0.2121	0 2175	9551 0	0.1764	10000	
						6/1-0	0.1330	0.1704	0.2891	0.3146

Number of theoretical sample periods Number of non operational sample periods

^{* -} non operational, data from the North site was used for Wind Direction and Wind Speed, if available

TCEQ Air M	TCEQ Air Monitoring Comparison Values (ppb	Values (ppb)	Investigation
Chemical	ST	LT	Limit (ppb)
Vinyl Chloride	27,000	0.47	25
Ethylene Dichloride	94	0.72	29.7
Benzene	180	1.4	28.2
Ethylene	900,000	30	200
1, 3 Butadiene	1,700	6	25

ETHYLENE DICHLORIDE	1/2 Reported LOD	(qaa)	0710	0.1700	0.1720	2.2989		1.2400	1.1400	8.4034	*	×		0.0000	0.0000		1 5400	1 7300	11 6208	50500	0.0302	ŧ
ETHYLENE	Actual	(qdd)	0921.0	0.170	1	2.2		1.2400	1.1400	8.4	*	*		dz.	WD *		1 \$400	1 7300		CIN.	*	
VINYL CHLORIDE	1/2 Reported LOD	(qdd)	0.0500	0.0500	١	ND		2.3200	2.3100	0.4320	*	*	*	00500	**	*	0.4010	0.5020	22.3699	0.0300	***	
VINYL C	Actual	(qdd)	QX	S		4	00000	2.3200	2.3100	0.4	*	*		Ę.	*		0.4010	0.5020		N N	*	
BENZENE	1/2 Reported LOD	(qdd)	0.2210	0.2380	7 4024	+/0/+	0 5300	0500	0.3620	-4.1780	*	*	*	0 1000	*	*	0.3230	0.3650	-12.2093	0.1610	*	
BEN	Actual	(qdd)	0.2210	0.2380			0 5300	05500	0.3020	.4-	*	*		0.1090	*		0.3230	0.3650		0.1610	*	
1,3 BUTADIENE	1/2 Reported LOD	(qdd)	0.1250	0.1250			0 1050	0.1750		ND	*	*		0.1250	*		0.1250	0.1250	ND	0.0302	*	
1,3 BUT	Actual	(qdd)	ND	ND	2		5	CN		Z	*	*		ND	*		ND	ND	Z	QN	*	
ETHYLENE	1/2 Reported LOD	(qdd)	0.0500	0.0500	CZ		0.0500	0.0500		ND	*	*		0.0500	*		0.1080	0.0500		0.3580	*	
ЕТНУ	Actual	(qdd)	ND	ND	2		QN.	CN		Z	*	*	*	ND	*	*	0.1080	ND	73.4177	0.3580	*	
AVG.WIND	SPEED (mph)		5.9	5.9	RPD)		2.2	2.2	1	KPD)	6.2	6.2	RPD)	5.9	5.9	RPD)	7.8	7.8	RPD)	6.3	6.3	, dag
AVG.WIND	DIRECTION	(Degrees)	153	153	Relative Percent Difference (RPD)		65	65	Domest Diff.	Relative Percent Difference (RPD)	324	324	Relative Percent Difference (RPD)	106	106	Relative Percent Difference (RPD)	42	42	Relative Percent Difference (RPD)	111	111	Deletine Beneaut Difference
SAMPLE DATE			07/16/18	07/16/18 _d	Relative		09/30/18	09/30/18	Doloti	Kelaliv	11/01/18	11/01/18 _d	Relative	12/25/18	12/25/18 _d	Relative	01/30/19	01/30/19 _d	Relative	05/30/19	05/30/19 _d	Dolotin

* - non operational, data from the North site was used for Wind Direction and Wind Speed, if available

FORMOSA VOC CANISTER ANALYSIS 2nd QUARTER 2019 POINT COMFORT - FORMOSA TRAINING COMPLEX

Actual (12) Reported LOD (appl) Actual (appl) T/2 Reported LOD (appl) Actual (app	SAMPLE DATE	AVG.WIND	AVG.WIND	ETH	ETHYLENE	1.3 BUT	1.3 BUTADIENE	BEN	BENZENE	2 IANIA	VINVI CHI OBIDE	and IADLA	Opine
11.15 11.00 <th< th=""><th></th><th>DIRECTION</th><th>SPEED (mph)</th><th>Actual</th><th>1/2 Reported LOD</th><th>Actual</th><th>1/2 Reported LOD</th><th></th><th>1/2 Reported LOD</th><th>Actual</th><th>1/2 Reported LOD</th><th>Actual</th><th>1/2 Reported I OD</th></th<>		DIRECTION	SPEED (mph)	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD		1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported I OD
150 150		(Degrees)		(qdd)	(qdd)	(pdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qad)	(unb)
1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	7/4/2018	126	7.1	*	*	*	*	*	*	*	*	*	*
1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	7/10/2018	121	4.6	ND	0.0500	QN	0.1250	0.2370	0.2370	Ð	0.0500	2	00500
11 1	7/16/2018	153	5.9	ND	0.0500	QN	0.1250	0.2580	0.2580	Q	00000	01030	0.0300
11/1 41/2 1000 ND 01200 ND 01	7/22/2018	176	5.7	Q.	0.0500	ON	0.1250	0.1080	0.1080	2	0.0500	0.1330	0.1330
1,15	7/28/2018	133	4.0	ND	0.0500	ND	0.1250	0.1810	0.1810	B	0.0500	Q	0.0500
153 156 Na 10000 Na 0.1250 Na 0.05500 Na 0.055	8/3/2018	107	4.1	N	0.0500	ND	0.1250	0.2720	0.2720	1.6000	1.6000	0.1470	0.1470
155 6.6 NB 0.0000 NB 0.1250 NB 0.10500 NB 0.0000 N	8/9/2018	138	5.6	QN	0.0500	ND	0.1250	ND	0.0500	Q	0.0500	0.1350	0.1350
1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	8/17/2018	135	0.9	ND	0.0500	ON	0.1250	Ð	0.0500	QN	0.0500	0.0960	0.090
111 143 NB 010500 NB 01250 NB 01000 NB 01250 NB 01350 NB 01250 NB 01350 NB 01350 NB 01250 NB 01350 NB 01250 NB	8/21/2018	155	5.4	N N	0.0500	ND	0.1250	0.1340	0.1340	QX	0.0500		00500
69 41 NN OR0000 NN 0.12540 O.1340 OR7400 OR7400 O.17400 O.17400 OR710 O	8/29/2018	121	4.3	ND	0.0500	ON	0.1250	QN	0.0500	8	0.0500	0.1020	0.000
187 1.1	8107/9/6	91	1.8	ON	0.0500	£	0.1250	0.3340	0.3340	0.7480	0.7480	1.2500	1.2500
187 187	9/12/2018	09	4.6	ON	0.0500	£	0.1250	Q	0.0500	E	0.0500	0.1140	0.1340
11 11 11 11 11 11 11 1	9/18/2018	187	1.3	*	*	*	*	*	*	*	*	*	*
158 123 NAD 010500 NAD 011200 016890 016890 016890 016890 018990 23400 23400 23400 23400 23400 23400 23400 23400 23400 23400 13300 13300 13300 13300 13300 13300 13400	9/24/2018	115	4.5	ND	0.0500	£	0.1250	0.1860	0 1860	E	0.050.0	EN C	00500
156 171 No. 182 173 No. 1126 1730 1730 No. 1720 1720 1720 17200	9/30/2018	65	2.2	Q.	0.0500	₽ E	0.1250	0.6890	0.689.0	2 7400	2 7400	00900	0.000
88 51 ND 61050 ND 61250 62890 13500 13500 13700 35700 234 153 1,20 1,2200 1,2200 1,2200 1,2200 1,2300 1,390 ND 234 6,2 1,5 1,2200 1,2200 ND 0,1250 0,5490 0,6490 1,390 ND 24 6,2 ND 0,0500 ND 0,1250 0,5490 0,6790 0,6790 0,790 46 6,2 ND 0,0500 ND 0,1250 0,5490 0,6790 0,6790 0,790 46 0,2 ND 0,0500 ND 0,1250 0,5490 0,790 0,790 0,790 4,4 ND 0,0500 ND 0,1250 0,2490 0,790 0,790 0,790 1,13 1,2 ND 0,0500 ND 0,1250 0,2400 0,790 0,790 0,790 1,13 1,2 ND <t< td=""><td>10/6/2018</td><td>126</td><td>7.1</td><td>*</td><td>*</td><td>*</td><td>*</td><td></td><td>*</td><td>*</td><td>*</td><td>**</td><td>***************************************</td></t<>	10/6/2018	126	7.1	*	*	*	*		*	*	*	**	***************************************
343 49 11200 11200 ND 011290 05310 05310 15300 15300 15300 15300 15300 15300 15300 15300 ND 15300 ND 15300 ND 15300 ND 15300 ND ND 15300 ND ND ND 15300 ND ND </td <td>10/12/2018</td> <td>88</td> <td>5.1</td> <td>R</td> <td>0.0500</td> <td>Q</td> <td>0.1250</td> <td>0.4090</td> <td>0.4090</td> <td>1 3300</td> <td>1 3300</td> <td>0000</td> <td>2,0200</td>	10/12/2018	88	5.1	R	0.0500	Q	0.1250	0.4090	0.4090	1 3300	1 3300	0000	2,0200
234 15 -	10/18/2018	343	4.9	1.2200	12200	E	0.1250	0.5310	0.5310	000001	1.2000	3.9700	3.9700
344 62 *	10/26/2018	249	1.5	*	*	*	*	*	*	**	**	dN *	0.0500
24 62 ND 0.0590 ND 0.1250 0.1250 0.1250 0.1250 0.1250 0.0590 ND 0.0590 ND 46 0.45 ND 0.05500 ND 0.1250 0.1250 0.0590 ND 0.0590 ND 46 0.45 ND 0.05500 ND 0.1250 0.2720 0.4590 0.4590 ND 0.0150 ND 240 2.40 1.2 ND 0.0580 ND 0.1250 0.4590 ND 0.0590 ND 102 1.2 ND 0.0580 ND 0.1250 0.2100 0.7120 0.0120 0.0590 ND 0.0590 0.0590 ND <td< td=""><td>11/1/2018</td><td>324</td><td>6.2</td><td>*</td><td>*</td><td>*</td><td>*</td><td>*</td><td>*</td><td>*</td><td>*</td><td>,</td><td>, ,</td></td<>	11/1/2018	324	6.2	*	*	*	*	*	*	*	*	,	, ,
88 45 ND 0.0590 ND 0.1250 0.1390 ND 0.0500 ND 0.1250 0.1250 0.1250 0.1250 0.1250 0.0500 ND 0.0500	11/11/2018	24	6.2	£	0.0500	Ð	0.1250	0.5490	0.5490	0.6790	06790	0.3200	0 3200
46 0.4 ND 0.0500 ND 0.1250 0.2610 0.720 0.7120 0.01700 0.0110 146 2.2 ND 0.0500 0.0220 0.1250 0.4590 ND 0.0500 0.0540 0.0540 240 2.7 ND 0.0500 ND 0.270 0.1200 ND 0.0500 ND 102 1.9 ND 0.0500 ND 0.1200 0.1500 ND 0.0500 ND 1102 1.7 ND 0.0500 ND 0.1220 0.1430 ND 0.0500 ND 1105 1.7 ND 0.0500 ND 0.1220 0.1430 ND 0.0500 ND 118 2.5 ND 0.0500 ND 0.1220 0.1430 ND 0.0500 ND 118 2.5 ND 0.0500 ND 0.1220 0.1430 ND 0.0500 ND 118 2.5 ND 0	11/17/2018	88	4.5	£	0.0500	£	0.1250	0.1320	0.1320	E	0.0500	0.5200 EM	0.02600
145 32 ND 0.05500 ND 0.4570 0.2720 0.4590 ND 0.05500	11/23/2018	46	0.4	QN.	0.0500	QN ON	0.1250	0.2610	0.2610	0.7120	0.000	04110	0.0300
240 27 ND 0.0500 ND 0.1250 0.2100 ND 0.02100 0.2100 ND 0.02400 ND 0.1250 0.2440 ND 0.0500 ND 0.1250 0.02440 0.1320 0.0500 ND 0.1250 0.02440 0.1320 0.01300 ND 0.0250 ND 0.01200 0.02440 0.01300 ND 0.01200 0.01200 ND 0.01200 <td>11/29/2018</td> <td>145</td> <td>3.2</td> <td>ND</td> <td>0.0500</td> <td>0.272</td> <td>0.2720</td> <td>0.4590</td> <td>0.4590</td> <td>2</td> <td>0.0500</td> <td>0.3840</td> <td>0.3840</td>	11/29/2018	145	3.2	ND	0.0500	0.272	0.2720	0.4590	0.4590	2	0.0500	0.3840	0.3840
102 1,9 * <td>12/1/2018</td> <td>240</td> <td>2.7</td> <td>ND</td> <td>0.0500</td> <td>QN</td> <td>0.1250</td> <td>0.2100</td> <td>0.2100</td> <td>Q.</td> <td>0.0500</td> <td>S</td> <td>00500</td>	12/1/2018	240	2.7	ND	0.0500	QN	0.1250	0.2100	0.2100	Q.	0.0500	S	00500
255 67 ND 0.0500 ND 0.1250 0.1570 0.1570 0.1570 0.1570 0.1570 0.1570 0.1570 0.1570 0.1570 0.1570 0.1570 0.1570 0.1570 0.0500 ND 0.0500 ND <t< td=""><td>12/7/2018</td><td>102</td><td>1.9</td><td>*</td><td>*</td><td>*</td><td>*</td><td>*</td><td>*</td><td>*</td><td>*</td><td>*</td><td>*</td></t<>	12/7/2018	102	1.9	*	*	*	*	*	*	*	*	*	*
15 1.7 ND 0.0500 ND 0.1250 0.2440 0.1320 0.1320 0.4010 314 4.5 ND 0.0500 ND 0.1250 0.1440 ND 0.0500 ND 314 4.2 ND 0.0500 ND 0.1250 0.1440 ND 0.0500 ND 118 5.8 ND 0.0500 ND 0.1250 ND 0.0500 ND 144 5.2 ND 0.0500 ND 0.1250 0.2620 ND 0.0500 ND 90 5.1 ND 0.0500 ND 0.1250 0.2620 ND 0.0500 ND 140 5.1 ND 0.0500 ND 0.1250 0.1270 ND 0.0500 ND 140 2.2 ND 0.0500 ND 0.1250 0.230 0.5130 0.5130 0.5130 140 2.2 ND 0.0500 ND 0.1250 0.230 <td>12/13/2018</td> <td>235</td> <td>6.7</td> <td>ND</td> <td>0.0500</td> <td>Ð</td> <td>0.1250</td> <td>0.1570</td> <td>0.1570</td> <td>QN</td> <td>0.0500</td> <td>S</td> <td>00500</td>	12/13/2018	235	6.7	ND	0.0500	Ð	0.1250	0.1570	0.1570	QN	0.0500	S	00500
106 59 ND 0.0500 ND 0.1250 0.1250 0.1430 ND 0.0430 ND 334 42 ND 0.0500 ND 0.1250 0.2340 0.0240 ND 0.0500 ND 317 44 ND 0.0500 ND 0.1250 0.2340 0.0500 ND 0.0500 ND 0.1250 0.0500 ND 0.0500 ND 0.1250 0.0500 ND 0.0500 ND 0.1250 ND 0.0500 ND 0.1500 ND 0.0500 ND 0.1500 ND 0.0500 ND 0.1500 ND 0.0500 ND 0.1250 0.1570 0.1170 ND 0.0500 ND 0.1250 0.1570 ND 0.0500 ND 0.1250 0.1170 ND 0.0500 ND 0.1250 0.1790 ND 0.0500 ND 0.1250 0.1790 ND 0.0500 ND 0.1250 0.1250 0.1500 ND 0.1500 <td>12/19/2018</td> <td>15</td> <td>1.7</td> <td>ΩN</td> <td>0.0500</td> <td>QN</td> <td>0.1250</td> <td>0.2440</td> <td>0.2440</td> <td>0.1320</td> <td>0.1320</td> <td>0.4010</td> <td>0.4010</td>	12/19/2018	15	1.7	ΩN	0.0500	QN	0.1250	0.2440	0.2440	0.1320	0.1320	0.4010	0.4010
334 42 ND 0.0500 ND 0.1250 ND 0.02340 ND 0.0500 ND 118 5.8 ND 0.0500 ND 0.1250 ND 0.0500 ND ND 137 44 ND 0.0500 ND 0.1250 0.0230 ND 0.0500 ND 90 5.1 ND 0.0500 ND 0.1250 0.1370 0.1670 ND 0.0500 ND 42 5.1 ND 0.0500 ND 0.1250 0.1670 0.1670 ND 0.0500 ND 142 5.2 ND 0.0500 ND 0.1520 0.1670 0.1700 ND 0.0500 ND 142 5.8 ND 0.0500 ND 0.1520 0.1700 ND 0.0500 ND 140 5.2 ND 0.0500 ND 0.1520 0.1790 0.1530 0.1650 ND 0.1500 ND	12/25/2018	106	5.9	ND	0.0500	QN	0.1250	0.1430	0.1430	QN	0.0500	Q	0.0500
118 5.8 ND 0.0500 ND 0.1250 ND 0.0500 ND ND 0.0500 ND 0.0500 ND 0.0500 ND 0.0250 ND 0.0500 ND 0.0250 ND 0.0500 ND 0.0250 0.01250 0.0250 0.01250 0.0500 ND 0.01250 0.01250 0.01310 ND 0.0500 ND 0.01250 0.01250 0.01310 ND 0.0500 ND 0.01250 0.01200 0.0130 ND 0.01500 ND 0.01250 0.01200 0.0130 ND 0.01500 ND 0.01200 0.0	12/31/2018	334	4.2	ND	0.0500	QN	0.1250	0.2340	0.2340	æ	0.0500	QN	0.0500
307 44 ND 0.0500 ND 0.1250 0.2520 0.0500 ND 0.0500 ND 0.1250 0.1310 ND 0.0500 ND 0.1100 ND 0.1250 0.1310 ND 0.0500 ND 0.1100 ND 0.1100 ND 0.1250 0.1250 0.1270 0.1270 ND 0.0500 ND 0.1250 0.1250 0.1270 ND 0.0500 ND 0.1250 0.1270 0.1270 ND 0.0500 ND 0.1250 0.1270 0.1270 ND 0.0500 ND 0.1250 0.1270	1/6/2019	118	5.8	QN	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	Ð	0.0500
144 52 ND 0.0500 ND 0.1250 0.3130 ND 0.0500 ND 0.1070 0.1350 ND 0.1670 ND 0.1790 0.1790 ND 0.0500 ND ND 0.1250 0.1790 0.1670 ND 0.1670 ND 0.1500	1/12/2019	307	4.4	S	0.0500	QN	0.1250	0.2620	0.2620	ND	0.0500	Ð	0.0500
90 51 ND 0.05500 ND 0.1550 0.1670 O.1670 ND 0.0500 ND 0.1550 0.1570 0.1570 0.1570 0.1530 0.5330 0.6790 ND 125 5.9 ND 0.05500 ND 0.1550 0.1170 0.1170 ND 0.0550 ND 140 2.2 ND 0.05500 ND 0.1250 0.2390 0.1390 0.1650 ND ND 140 1.2 *<	1/18/2019	4	5.2	Q	0.0500	QQ.	0.1250	0.3130	0.3130	ND	0.0500	0.1100	0.1100
42 78 ND 0.05500 ND 0.1250 0.2230 0.5130 0.5130 0.6790 ND 1125 5.3 ND 0.05500 ND 0.0584 0.1750 0.1170 ND 0.0500 ND ND ND ND 0.0550 ND ND ND ND 0.1350 0.1790 0.1790 ND 0.0500 ND ND ND 0.1550 0.1790 0.1790 0.1790 0.1790 0.1790 ND 0.0500 ND ND 0.1550 0.1790 0.1790 0.1650 ND ND ND 0.1550 0.1290 0.1550 0.1550 0.1550 0.1550 0.1550 0.1550 0.1550 0.1550 0.1550 0.1550 0.1580 ND 0.1550 0.1580 ND	1/24/2019	06	5.1	Q	0.0500	QN	0.1250	0.1670	0.1670	ND	0.0500	QN	0.0500
125 59 ND 0,0500 0,684 0,6840 0,1170 0,1170 ND 0,0500 ND 140 2.2 ND 0,0500 ND 0,1250 0,1790 0,1790 0,1790 ND 0,0500 ND 336 5.3 ND 0,0500 ND 0,1250 0,2990 0,1650 0,1650 ND ND 137 1.2 *	1/30/2019	42	7.8	2	0.0500	Q.	0.1250	0.2230	0.2230	0.5130	0.5130	0.6790	0.6790
140 2.2 ND 0.0500 ND 0.1250 0.1790 0.1790 ND 0.0500 ND 336 3.3 ND 0.0500 ND 0.1250 0.2990 0.0500 0.1650 ND 197 1.2 * * * * * * * * 197 1.2 * * * * * * * * * 113 4.2 *	2/5/2019	125	5.9	QN	0.0500	0.684	0.6840	0.1170	0.1170	ND	0.0500	Q	0.0500
336 5.3 ND 0.0550 ND 0.1250 0.2990 0.1650 0.1650 ND 197 1.2 *	2/11/2019	140	2.2	Q.	0.0500	QN	0.1250	0.1790	0.1790	ND	0.0500	Ð	0.0500
197 1.2 * <td>2/17/2019</td> <td>336</td> <td>5.3</td> <td>QN</td> <td>0.0500</td> <td>QN</td> <td>0.1250</td> <td>0.2990</td> <td>0.2990</td> <td>0.1650</td> <td>0.1650</td> <td>QN.</td> <td>0.0500</td>	2/17/2019	336	5.3	QN	0.0500	QN	0.1250	0.2990	0.2990	0.1650	0.1650	QN.	0.0500
357 3.2 ND 0.0500 ND 0.1550 0.2570 0.2570 0.4270 0.4270 0.1600 113 4.2 * * * * * * * * * 140 9.4 ND 0.0500 ND 0.1250 0.1380 ND 0.0500 ND ND *	2/23/2019	197	1.2	*	*	*	*	*	*	*	*	*	*
113 4.2 * <td>3/1/2019</td> <td>357</td> <td>3.2</td> <td>Q.</td> <td>0.0500</td> <td>ND</td> <td>0.1250</td> <td>0.2570</td> <td>0.2570</td> <td>0.4270</td> <td>0.4270</td> <td>0.1600</td> <td>0.1600</td>	3/1/2019	357	3.2	Q.	0.0500	ND	0.1250	0.2570	0.2570	0.4270	0.4270	0.1600	0.1600
140 94 ND 0.0500 ND 0.1250 0.1380 ND 0.0500 ND 57 6.7 * * * * * * * 142 3.2 * * * * * * * 337 6.4 * * * * * *	3/7/2019	113	4.2	*	*	*	*	*	*	*	*	*	*
57 6.7 * * * * * * * 142 3.2 * * * * * * 337 6.4 * * * * *	3/13/2019	140	9.4	ND	0.0500	QN	0.1250	0.1380	0.1380	QN	0.0500	Ð	0.0500
142 3.2 * * * * * * * 337 6.4 * * * * * *	3/19/2019	57	6.7	*	*	*	*	*	*	*	*	*	*
337 6.4 * * * * * *	3/25/2019	142	3.2	*	*	*	*	*	*	*	*	*	*
	3/31/2019	337	6.4	*	*	*	*	*	*	*	*	*	*

FORMOSA VOC CANISTER ANALYSIS 2nd QUARTER 2019 POINT COMFORT - FORMOSA TRAINING COMPLEX

SAMPLE DATE	AVG.WIND	AVG.WIND	ETH	ETHYLENE	1,3 BUT	1,3 BUTADIENE	BEN	BENZENE	VINYL	VINYL CHLORIDE	FTHVLENE	ETHYLENE DICHLORIDE
	DIRECTION	SPEED (mph)	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD
	(Degrees)		(pdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qad)	(qaa)	(huu)
4/6/2019	103	8.2	*	*	*	*	*	*	*	*	*	*
4/12/2019	83	6.9	*	*	*	*	*	*	*	*		,
4/18/2019	242	9.0	6.0400	6.0400	Ð	0.0311	0.1930	0.1930	0.2730	0.7730	03740	02240
4/24/2019	119	8.0	1.5800	1.5800	Q	0.0595	01110	01110	0.0836	007730	04/CO	0.5740
4/30/2019	115	11.2	0.3980	0.3980	QN	0.0309	0.1440	0 1440	OCOU.	0.0000	ON A	0.090
5/6/2019	101	5.1	0.9630	0.9630	Q	0.0318	0.1420	0.1420	00000	0.0000	ND 0	0.0309
5/12/2019	255	5.0	0.9540	0.9540	QN.	0.0304	0.1550	0.1550	0.4020	0.2020	0.1400	0.1920
5/18/2019	124	10.3	0.4150	0.4150	Q.	0.0315	Q.	0.0315	Q	0.0315	N	0.1920
5/24/2019	113	10.2	0.3510	0.3510	Ð	0.0310	0.1020	0.1020	Q	00310		0.0310
5/30/2019	111	6.3	2.4600	2.4600	Q.	0.0301	0.5210	0.5210	2	0.0301	1 3500	1 2500
6/5/2019	226	4.5	0.8630	0.8630	Q	0.0303	0.1200	0.1200	0.0808	0.0808	0 1300	0.1300
6/11/2019	225	4.4	2.4400	2.4400	ND	0.0343	0.2230	0.2230	0.5690	0.5690	0.4410	0.4410
6/17/2019	157	5.1	2.5600	2.5600	ND	0.0355	0.1730	0.1730	0.1150	0.1150	1.8900	1.8900
6/23/2019	136	9.4	0.2720	0.2720	ND	0.0333	0.175	0.1750	2	0.0333	QN	0.0333
6/29/2019	165	4.1	0.8770	0.8770	ND	0.0319	0.2200	0.2200	2	0.0319	0.1860	0 1860
												20010
			ETHY	ETHYLENE	1,3 BUT	1,3 BUTADIENE	BEN	BENZENE	VINYLC	VINYL CHLORIDE	ETHVI ENE	ETHYLENE DICHLORIDE
			Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD
			(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qaa)
	Year-To-Date Sum		21.3930	23.0430	0.9560	5.3973	9.9620	10.2435	12.1614	13.5000	15.8590	16.8952
	Rolling Year Average		0.4552	0.4903	0.0203	0.1148	0.2120	0.2179	0.2588	0.2872	0.3374	0.3595
	Annual Average		0.8771	0.8988	0.0297	0.0978	0.1841	0.1876	0.1231	0.1465	0.2457	0.2691
Number of theoretical samula neriods	apoined eluc		9	9		Ş	\$	Ş				
Minute Section 19	The periods		20 ;	90	G :	00	09	09	09	09	09	09
Number of non operational sample periods	d sample periods		13	13	13	13	13	13	13	13	13	13

^{* -} non operational, data from the North site was used for Wind Direction and Wind Speed, if available

TCEQ Air Mo	TCEQ Air Monitoring Comparison Values (ppb)	Values (ppb)	Investigation
Chemical	ST	LT	Limit (ppb)
Vinyl Chloride	27,000	0.47	25
Ethylene Dichloride	94	0.72	29.7
Benzene	180	1.4	28.2
Ethylene	500,000	30	200
1, 3 Butadiene	1,700	6	25

FORMOSA VOC CANISTER ANALYSIS 2nd QUARTER 2019 POINT COMFORT - FORMOSA TRAINING COMPLEX DUPLICATE SAMPLE SCHEDULE

Reported LOD Actual (ppb) 1/2 Reported LOD Actual (ppb) Actual (p	SAMPLE DATE	AVG.WIND	AVG.WIND	ETH	ETHYLENE	1,3 BUT	1,3 BUTADIENE	BEN	BENZENE	VINYL	VINYI, CHI, ORIDE	FTHVI FNF	ETHYLENE DICHLOBIDE
Comparison Com		DIRECTION	SPEED (mph)	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD
176 176 5.7 ND 0.0500 ND 0.1250 0.1190 184 184 5.6 ND 0.0500 ND 0.1250 0.1190 184 184 5.6 ND 0.0500 ND 0.1250 ND 184 184 5.6 ND 0.0500 ND 0.1250 ND 185 185 185 ND 0.0500 ND 0.1250 ND 185 185 185 ND 0.0500 ND 0.1250 ND 185 185 185 ND 0.0500 ND 0.1250 0.4390 185 185 185 ND 0.0500 ND 0.1250 0.4390 185 185 ND 0.0500 ND 0.1250 0.4390 185 185 185 ND 0.0500 ND 0.1250 0.1250 0.1250 185 185 185 ND 0.0500 ND 0.1250 0.1250 0.1250 185 185 185 ND 0.0500 ND 0.1250 0.1250 0.1250 185 185 185 ND 0.0500 ND 0.1250 0.1250 0.1250 185 185 185 ND 0.0500 ND 0.1250 0.1250 0.1250 185 185 185 ND 0.0500 ND 0.1250 0.1250 ND 181 185 185 ND 0.0500 ND 0.1250 ND 181		(Degrees)		(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qad)
176 176 176 175	07/22/18	176	5.7	ND	0.0500	ND	0.1250	0.1080	0.1080	QN	0.0500	0.1330	0.1330
ND ND ND ND ND ND ND ND	07/22/18d	176	5.7	ND	0.0500	ND	0.1250	0.1190	0.1190	ND	0.0500	0.1490	0.1490
138 5.6 ND 0.0500 ND 0.1250 ND	Relative	e Percent Difference	(RPD)		ND	Z	ID	-6-	9.6916		ND		-11.3475
138 5.6 ND 0.0500 ND 0.1250 ND 138 5.6 ND 0.0500 ND 0.1250 ND 60 4.6 ND 0.0500 ND 0.1250 ND 60 4.6 ND 0.0500 ND 0.1250 ND 60 4.6 ND 0.0500 ND 0.1250 ND 64 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 84 4.9 1.2													
138 5.6 ND ND ND ND ND ND ND N	08/09/18	138	5.6	ND	0.0500	ND	0.1250	ND	0.0500	QN	0.0500	0.1350	0.1350
ND ND ND ND ND ND ND ND	08/09/18d	138	- 1	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	0.1750	0.1750
Relative Percent Difference (RPD) ND 0.05000 ND 0.01250 ND Relative Percent Difference (RPD) 4.9 1.2200 1.2200 ND 0.0550 ND Relative Percent Difference (RPD) 4.9 1.2200 1.2200 ND 0.1250 0.4330 Relative Percent Difference (RPD) 5.8 ND 0.05900 ND 0.1250 0.4330 Relative Percent Difference (RPD) ND 0.0500 ND 0.1250 0.1250 0.0380 Relative Percent Difference (RPD) ND 0.0500 ND 0.0500 ND 0.1250 ND Relative Percent Difference (RPD) ND 0.0500 ND 0.0500 ND 0.1250 ND Relative Percent Difference (RPD) ND 0.0500 ND 0.1250 ND Relative Percent Difference (RPD) ND 0.0500 ND 0.1250 ND Relative Percent Difference (RPD) ND 0.0500 ND 0.1250 ND 157 5.9 ND<	Relative	e Percent Difference	(RPD)		ND	Z	ID.		ND		ND		-25.8065
60 46 ND 0.0500 ND 0.1250 ND Relative Percent Difference (RPD) 4.6 ND 0.0500 ND 0.1250 ND Relative Percent Difference (RPD) 4.9 1.2200 1.2200 ND 0.1250 0.5310 Relative Percent Difference (RPD) 0.5900 ND 0.1250 0.4390 Relative Percent Difference (RPD) ND 0.05900 ND 0.1250 0.4390 Relative Percent Difference (RPD) ND 0.0500 ND 0.1250 ND Relative Percent Difference (RPD) ND 0.0500 ND 0.1250 ND Aclative Percent Difference (RPD) ND 0.0500 ND 0.1250 ND Aclative Percent Difference (RPD) ND 0.0500 ND 0.1250 ND Aclative Percent Difference (RPD) ND 0.0500 ND 0.1250 ND Aclative Percent Difference (RPD) ND 0.0500 ND 0.1250 ND Aclative Percent Difference (RPD) <td></td>													
Relative Percent Difference (RPD)	09/12/18	09	4.6	ND	0.0500	ON	0.1250	ND	0.0500	QN	0.0500	0.1140	01140
Static Percent Difference (RPD) ND ND ND ND ND ND ND	09/12/18d	60	4.6	ND	0.0500	ND	0.1250	ND	0.0500	QN	0.0500	0.1130	01130
Static Percent Difference (RPD)	Relative	e Percent Difference	(RPD)		ND	Z					GN		0.8811
State Stat													
National Percent Difference (RPD)	10/18/18	343	4.9	1.2200	1.2200	ND	0.1250	0.5310	0.5310	1.3900	1.3900	GN	0.0500
Relative Percent Difference (RPD) 69.6133 ND	10/18/18 _d	343	4.9	0.5900	0.5900	QN.	0.1250	0.4390	0.4390	1.3400	1.3400	QX	0.0500
118 5.8 ND 0.0500 ND 0.1250 ND 118 5.8 ND 0.0500 ND 0.1250 0.3830 125 5.9 ND 0.0500 ND 0.1250 0.1170 127 5.9 ND 0.0500 ND 138.1953 0.1730 157 5.1 2.8600 ND 0.0355 0.1730 157 5.1 2.8600 ND 0.0355 0.1730 157 5.1 2.8100 ND 0.0343 0.1780 157 5.1 2.8100 ND 0.0343 0.1780 158 157 5.1 2.8100 ND 0.0343 0.1780 150 150 150 110 0.0343 0.1780 150 150 110 110 0.0343 0.1780 150 150 110 110 0.0343 0.1780 150 150 110 110 0.0343 0.1780 150 150 110 110 0.0343 0.1780 150 150 110 0.0343 0.1780 150 150 110 0.0343 0.1780 150 150 110 0.0343 0.1780 150 150 110 0.0343 0.1780 150 150 110 0.0343 0.1780 150 150 110 0.0343 0.1780 150 150 110 0.0343 0.1780 150 150 110 0.0343 0.1780 150 150 110 0.0343 0.1780 150 150 110 0.0343 0.1780 150 150 110 0.0343 0.1780 150 150 110 0.0343 0.1780 150 150 110 0.0343 0.1780 150 150 110 0.0343 0.1780 150 150 110 0.0343 0.1780 150 150 110 0.0343 0.1780 150 150 110 0.0343 0.1780 150 150 110 0.0343 0.1780 150 150 150 110 0.0343 0.1780 150 150 150 110 0.0343 0.1780 150 150 150 150 150 150 10 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150	Relative	e Percent Difference	(RPD)	59	3.6133	Z	D	18.	.9691		3.6630		CN
118 5.8 ND 0.0500 ND 0.1250 ND 118 5.8 ND 0.0500 ND 0.1250 0.3830 128 125 5.9 ND 0.0500 ND 0.1250 0.1170 129 5.9 ND 0.0500 ND 0.1250 ND 121 122 5.9 ND 0.0500 ND 138.1953 157 5.1 2.8600 ND 0.0355 0.1730 157 5.1 2.8600 ND 0.0343 0.1730 157 5.1 2.8100 ND 0.0343 0.1730 158 157 2.8100 ND 0.0343 0.1730 158 157 2.8100 ND 0.0343 0.1730 158 158 158 0.1730 0.1730 158 0.1730 0.1730 0.1730 158 0.1730 0.1730 0.1730 158 0.1730 0.1730 0.1730 158 0.1730 0.1730 0.1730 158 0.1730 0.1730 0.1730 158 0.1730 0.1730 0.1730 0.1730 158 0.1730 0.1730 0.1730 0.1730 158 0.1730 0.1730 0.1730 0.													
118 5.8 ND 0.0500 ND 0.1250 0.3830	01/06/19	118	5.8	ND	0.0500	ND	0.1250	ND	0.0500	QN	0.0500	QN	0.0500
ND ND ND ND ND ND ND ND	01/06/19 _d	118	5.8	QN	0.0500	ND	0.1250	0.3830	0.3830	ND	0.0500	ND	0.0500
125 5.9 ND 0.0500 0.6840 0.1170 0.1170 0.0500 ND 0.0500 ND 0.1150 ND 0.0500 ND 0.1250 0.1250 ND 0.1250 0.1250 ND 0.0355 0.1730 0.1780 ND 0.0343 0.1780 0.1780 ND 0.0343 0.1780 ND 0.0343 0.1780 0.1780 ND 0.0343 0.1780 0.1780 ND 0.1780 0.1780 ND 0.1780 0.1780 0.1780 ND 0.1780 0.1780 0.1780 ND 0.1780 0.178	Relative	e Percent Difference	(RPD)		ND	Z	D	-153	3.8106		ND	2	ND
125 5.9 ND 0.0500 0.6840 0.0840 0.1170 125 5.9 ND 0.0500 ND 0.1250 ND													
125 5.9 ND 0.0500 ND 0.1250 ND ND O.0500 ND 138.1953 ND O.0500 ND O.0500 ND O.0500 ND O.0500 ND O.0500	02/05/19	125	5.9	ND	0.0500	0.6840	0.6840	0.1170	0.1170	ND	0.0500	QN	0.0500
Actative Percent Difference (RPD) ND 138.1953 138.1953 13.105 5.1 2.5600 ND 0.0355 0.1730 Actative Percent Difference (RPD) 5.1 2.8100 ND 0.0343 0.1780	02/05/19 _d	125	5.9	ND	0.0500	ND	0.1250	ON	0.0500	ND	0.0500	ND	0.0500
157 5.1 2.5600 2.5600 ND 0.0355 0.1730 157 5.1 2.8100 ND 0.0343 0.1780 158 5.1 2.8100 ND 0.0343 0.1780 159 50 5110 ND 0.0343 0.1780 150 50 50 50 50 50 150 50 50 50 50 150 50 50 50 50 150 50 50 50 50 150 50 50 50 50 150 50 50 50 50 150 50 50 50 50 150 50 50 50 50 150 50 50 50 150 50 50 50 150 50 50 50 150 50 50 50 150 50 50 50 150 50 50 50 150 50 50 50 150 50 50 50 150 50 50 50 150 50 50 50 150 50 50 50 150 50 50 50 150 50 50	Relative	e Percent Difference	(RPD)		ND	138.	1953	80.	.2395		ND		QN.
157 5.1 2.5600 2.5600 ND 0.0355 0.1730 157 5.1 2.8100 ND 0.0343 0.1780 28101 Percent Difference (RPD) 0.3110 ND 0.0343 0.1780 3													
157 5.1 2.8100 2.8100 ND 0.0343 0.1780 0.	06/17/19	157	5.1	2.5600	2.5600	ND	0.0355	0.1730	0.1730	0.1150	0.1150	1.8900	1.8900
-0.3110 NRP	06/17/19 _d	157		2.8100	2.8100	ND	0.0343	0.1780	0.1780	0.1190	0.1190	1.8300	1.8300
O11C-5-	Relative	e Percent Difference	(RPD)	6-	-9.3110	Z	ND	-2.	-2.8490	-3.	-3.4188	3.2	3.2258

d - Duplicate sample taken in addition to the routine sample (See Calculation Methodology for information on inclusion of duplicate sample results.)

^{* -} non operational, data from the North site was used for Wind Direction and Wind Speed, if available

FORMOSA VOC CANISTER ANALYSIS 2nd QUARTER 2019 POINT COMFORT - PARK SITE

ETHYLENE DICHLORIDE	1/2 Reported LOD	(qdd)	0.0500	0.0500	0.1010	0.0500	0.6500	0.6730	0.0500	0.0500	00200	0.1040	0 1590	*	0.3570	*	*	*	7,3000	0.1260	0.0500	0.6500	0.0500	0.0500	*	0.7780	0.0500	0.0500	0.0500	0.9900	0.0500	0.0500	0.0500	0.0500	0.0500	0.2460	0.9420	0.2840	0.0500	0.0500	*	0.3250	*	0.0500	*	* *	-
ETHYLENE	Actual	(pbb)	QN	QN	0.1010	ΩN	0.6500	0.6730	ND	QN	Q	0.1040	0.1590	*	0.3570	*	*	*	7.3000	0.1260	QN	0.6500	ND	QN	*	0.7780	ND	ND	ND	0.9900	ND	ND	QN	Q	QV	0.2460	0.9420	0.2840	ND	QN	*	0.3250	*	QN ,	*	* *	
ORIDE	1/2 Reported LOD	(qdd)	1.0300	0.0500	0.0500	0.0500	0.2380	1.1700	0.0500	0.0500	0.0500	0.0500	0.3670	*	0.0500	*	*	*	2.7200	2.0600	0.0500	0.2380	0.0500	0.0500	*	0.4050	0.0500	0.0500	0.0500	0.3010	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.5180	1.3600	0.0500	0.0500	*	0.3860	*	0.0500		+ +	
VINYL CHLORIDE		(qdd)	1.0300	ND	ND	ND	0.2380	1.1700	ND	QN	QN	QZ	0.3670	*	ND	*	*	*	2.7200	2.0600	ND	0.2380	ND	QN	*	0.4050	QN.	QN	ND	0.3010	ND	ND	ΩN	QN	Q	ON	0.5180	1.3600	Q.	Q	* 000	0.3860	* 5	ND *	ŧ +	*	
ENE	1/2 Reported LOD	(qdd)	0.3940	0.1750	0.1600	0.1020	0.2490	0.3470	0.0500	0.1150	0.0500	0.1940	0.1080	*	0.5080	*	*	*	0.2730	0.8150	0.2160	0.0000	0.0500	0.1430	*	0.4350	0.1660	0.2060	0.1180	0.2070	0.1430	0.2350	0.1870	0.2620	0.3480	0.1410	0.5340	0.2940	0.2020	0.0500	*	0.2080	* 0351	0.1730 *	. ,	*	
BENZENE	_	(qdd)	0.3940	0.1750	0.1600	0.1020	0.2490	0.3470	ND	0.1150	QN	0.1940	0.1080	*	0.5080	*	*	*	0.2730	0.8150	0.2160		QN	0.1430	*	0.4350	0.1660	0.2060	0.1180	0.2070	0.1430	0.2350	0.1870	0.2620	0.3480	0.1410	0.5340	0.2940	0.2020	QN .	00000	0.2080	0321.0	*	*	*	
1,3 BUTADIENE	1/2 Reported LOD	(qdd)	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.2500	0.1250	0.1250	*	0.1250	*	*	*	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	*	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.0500	0.1250	0.1250	0.1250	0.1250	0.1250	0.120	0.5120	03610	V.1230	03010	***************************************	*	*	•
1,3 BU	Actual	(qdd)	QN	ND	ON	ND	ND	ND	ND	ND	ND	ND	ND	*	ND	*	*	*	ND	ND	ND	ND	ND	ND	*	ND	ND	N	ND	ND	QN	ND	QN	Q S	S S	2 5	2 5	ON S	UND CESO	0.312	. CZ	*	. CZ	*	*	*	
ETHYLENE	1/2 Reported LOD	(qdd)	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	*	0.0500	*	*	*	0.0500	0.5680	0.5910	0.0500	0.0500	0.0500	*	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.000	0.0300	00500	0.0500	0.0000	0.3030	00500	*	0.0500	*	*	*	
ЕТНУ	Actual	(qdd)	QN	ND	QN	ND	ND	ND	QV	ND	ND	ND	ND	*	ND	*	*	*	ND	0.5680	0.5910	QN	QV	ND	*	ND	ND	ND	QV.	ND	ND	QN	ON!	ON C	2 2	G S	2	Q S	0.3030	V.3030	S	*	S	*	*	*	
AVG.WIND	SPEED (mph)		7.1	4.6	5.9	5.7	4.0	4.1	5.6	0.9	5.4	4.3	1.8	4.6	1.3	4.5	2.2	7.1	5.1	4.9	1.5	6.2	4.8	7.6	4.5	3.0	2.7	1.9	6.7	1.7	5.9	3.2	9.8	4.4	2.0	7.8	0.5	5.5	5.3	2.5	3.5	4.2	9.4	6.7	3.2	6.4	
AVG.WIND	DIRECTION	(Degrees)	126	121	153	176	133	107	138	135	155	121	91	09	187	115	65	126	88	343	249	324	157	321	88	316	240	102	235	15	106	254	118	30/	Un On	42	125	140	33,6	701	357	113	140	57	142	337	
SAMPLE DATE		0.00	1/4/2018	7/10/2018	7/16/2018	7/22/2018	7/28/2018	8/3/2018	8/9/2018	8/17/2018	8/21/2018	8/29/2018	9/6/2018	9/12/2018	9/18/2018	9/24/2018	9/30/2018	10/6/2018	10/12/2018	10/18/2018	10/26/2018	11/1/2018	11/7/2018	11/13/2018	11/17/2018	11/25/2018	12/1/2018	12/7/2018	12/13/2018	12/19/2018	12/25/2018	12/31/2018	6107/9/1	91077111	01004011	1/30/2019	91003/0	2/11/0019	91077176	202000	3/1/2019	3/1/2019	3/13/2019	3/19/2019	3/25/2019	3/31/2019	

FORMOSA VOC CANISTER ANALYSIS 2nd QUARTER 2019 POINT COMFORT - PARK SITE

SAMPLE DATE	AVG.WIND	AVG.WIND	ETHN	ETHYLENE	1,3 BU	1,3 BUTADIENE	BEN	BENZENE	VINYLC	VINYL CHLORIDE	ETHYLENE	ETHYLENE DICHLORIDE
	DIRECTION	SPEED (mph)	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD						
	(Degrees)		(qdd)	(qdd)	(ppb)	(qdd)	(qdd)	(qdd)	(qdd)	(qaa)	(qaa)	(uuh)
4/6/2019	103	8.2	*	*	*	*	*	*	*	*	*	*
4/12/2019	83	6.9	*	*	*	*	*	*	*	*	*	*
4/18/2019	242	6.0	5.6700	5.6700	ND	0.0372	0.2630	0.2630	0.1410	0.1410	0.2020	02020
4/24/2019	119	8.0	1.5500	1.5500	ND	0.0319	0.1110	0.1110	0.9760	09260	NO.	0.230
4/30/2019	115	11.2	*	*	*	*	*	*	*	*	*	*
5/6/2019	101	5.1	1.3500	1.3500	ND	0.0326	0.2230	0.2230	0.1280	0.1280	0.1680	0.1680
5/12/2019	255	5.0	1.0600	1.0600	ND	0.0335	0.1450	0.1450	0.5410	0.5410	0.1690	0.1690
5/18/2019	124	10.3	0.2990	0.2990	ND	0.0341	0.0771	0.0771	QN	0.0341	ND	0.0341
5/24/2019	113	10.2	0.2660	0.2660	ND	0.0312	0.0662	0.0662	ND	0.0312	ND	0.0312
5/30/2019	111	6.3	0.4990	0.4990	ND	0.0403	0.1970	0.1970	0.0838	0.0838	0.1340	0.1340
6/5/2019	226	4.5	1.0200	1.0200	ND	0.0327	0.5860	0.5860	0.1440	0.1440	1.3800	1.3800
6/11/2019	225	4.4	1.2900	1.2900	ND	0.0363	0.1850	0.1850	0.5230	0.5230	0.2710	0.2710
6/17/2019	157	5.1	3.2900	3.2900	ND	0.0361	0.1270	0.1270	0.1550	0.1550	3.5900	3.5900
6/23/2019	136	9.4	0.4860	0.4860	ND	0.0367	0.173	0.1730	QN.	0.0367	0.123	0.1230
6/29/2019	165	4.1	0.9810	0.9810	ND	0.0367	0.1570	0.1570	ND	0.0367	0.6650	0.6650

	ETH	ETHYLENE	1,3 BU	1,3 BUTADIENE	BEI	BENZENE	VINYLC	VINYL CHLORIDE	ETHYLENE	STHYLENE DICHLORIDE
	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD
	(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qdd)
Year-To-Date Sum	19.2230	20.8230	0.5120	5.2310	9.7903	9.9903	13.4848	14.7734	20.3920	21.4892
Rolling Year Average	0.4090	0.4430	0.0109	0.1113	0.2083	0.2126	0.2869	0.3143	0.4339	0.4572
Annual Average	0.8211	0.8415	0.0033	0.090.0	0.2037	03000	0.3363	32770	0.302	27070
9		21.00	0.0	0.0000	0.5037	0.2000	0.2233	0.2473	0.3865	0.4046
Number of theoretical sample periods	09	09	99	09	09	09	09	09	09	09
Number of non operational sample periods	13	13	13	13	13	13	13	13		13

^{* -} non operational, data from the North site was used for Wind Direction and Wind Speed, if available

TCEQ Air Mor	TCEQ Air Monitoring Comparison Values (ppb)	Values (ppb)	Investigation
Chemical	ST	LT	Limit (ppb)
Vinyl Chloride	27,000	0.47	25
Ethylene Dichloride	94	0.72	29.7
Benzene	180	1.4	28.2
Ethylene	500,000	30	200
1, 3 Butadiene	1,700	6	25

SAMPLE DATE	AVG.WIND	AVG.WIND		ETHYLENE	1,3 BUT	1,3 BUTADIENE	BEN	BENZENE	VINYL	VINYL CHLORIDE	ETHYLENE	ETHYLENE DICHLORIDE
	DIRECTION	SPEED (mph)	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD
	(Degrees)		(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qdd)
07/28/18	133	4.0	ND	0.0500	ND	0.1250	0.2490	0.2490	0.2380	0.2380	0.6500	0.6500
07/28/18 _d	133	4.0	ND	0.0500	ND	0.1250	0.2500	0.2500	0.2350	0.2350	0.6380	0.6380
Relati	Relative Percent Difference (RPD)	(RPD)		ND	2	ND		-0.4008		1.2685		1.8634
08/29/18	121	4.3	ON	0.0500	ND	0.1250	0.1940	0.1940	QN	0.0500	0 1040	0.1040
08/29/18 _d	121	4.3	ND	0.0500	QN	0.1250	ND	0.0500	QN	0.0500	0.1080	0.1080
Relati	Relative Percent Difference (RPD)	(RPD)		ND		NO NO	118	118.0328		CN		3 7736
												000
09/18/18	187	1.3	ND	0.0500	QN	0.1250	0.5080	0.5080	ND	0.0500	0.3570	0.3570
09/18/18 _d	187	1.3	ND	0.0500	QN	0.1250	0.5940	0.5940	ND	0.0500	0.2820	0.2820
Relativ	Relative Percent Difference (RPD)	(RPD)	1	ND	4	QN	-15	-15.6080		ND		73 4742
10/14/18	123	7.0	ND	0.0500	ND	0.1250	0.2730	0.2730	2.7200	2.7200	0008.2	7 3000
10/14/18 _d	123	7.0	*	*	*	*	*	*	*	*	*	*
Relativ	Relative Percent Difference (RPD)	(RPD)		*		*		*		*		*
12/07/18	102	1.9	QN	0.0500	ΩN	0.1250	0.2060	0.2060	QN	00500	CZ	00500
12/07/18 _d	102	1.9	*	*	*	*	*	*	*	*	*	*
Relativ	Relative Percent Difference (RPD)	(RPD)		*		*		*		*		
02/11/19	140	2.2	ND	0.0500	ND	0.1250	0.2020	0.2020	ND	0.0500	QN	0.0500
02/11/19 _d	140	2.2	ND	0.0500	ND	0.1250	0.2200	0.2200	0.1040	0.1040	0.1290	0.1290
Relativ	Relative Percent Difference (RPD)	(RPD)	_	ND	Z	QN	8-	8.5308)	-70.1299		88 2682
												700
05/12/19	255	5.0	1.0600	1.0600	ND	0.0335	0.1450	0.1450	0.5410	0.5410	0.1690	0.1690
05/12/19 _d	255	5.0	1.0900	1.0900	ND	0.0348	0.1420	0.1420	0.5150	0.5150	0.1690	0.1690
Relati	Relative Percent Difference (RPD)	(RPD)	-2.	-2.7907	Z	ND	2.0	2.0906	4	4.9242		0.0000
												000

d - Duplicate sample taken in addition to the routine sample (See Calculation Methodology for information on inclusion of duplicate sample results.)

^{* -} non operational, data from the North site was used for Wind Direction and Wind Speed, if available

SAMPLE DATE	AVG.WIND	AVG.WIND		ETHYLENE	1,3 BUT	1,3 BUTADIENE	BEN	BENZENE	VINYL C	VINYL CHLORIDE	ETHYLENE	ETHYLENE DICHLORIDE
	DIRECTION (Degrees)	SPEED (mph)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD	Actual (nnh)	1/2 Reported LOD	Actual (path)	1/2 Reported LOD	Actual	1/2 Reported LOD
7/2/2018	140	5.3	QN.	0.0500	ND ON	0.1250	QN	0.0500	G N	00500	CN	(00500
7/4/2018	130	2.8	ND	0.5000	QN.	1.2500	Ð	0.5000	Q	0.5000	10.3000	10 3000
7/6/2018	208	0.7	ND	0.0500	ND	0.1250	0.3180	0.3180	0.1040	0.1040	0.3430	0.3430
7/8/2018	161	2.8	Q.	0.0500	QN Q	0.1250	0.1930	0.1930	QN	0.0500	S S	0.0500
7/10/2018	121	4.6	ΩN	0.0500	ND	0.1250	0.3650	0.3650	ND	0.0500	Q.	0.0500
7/12/2018	146	4.3	QN	0.0500	ΩN	0.1250	ND	0.0500	ND	0.0500	QN	0.0500
7/14/2018	138	6.1	Q.	0.0500	ND ND	0.1250	QN	0.0500	ND	0.0500	ND	0.0500
7/16/2018	153	5.9	Q.	0.0500	ND	0.1250	0.1080	0.1080	ND	0.0500	QN	0.0500
7/18/2018	164	5.6	Ð	0.5000	ND	0.1250	0.1850	0.1850	ND	0.0500	Ð	0.0500
7/20/2018	163	5.9	QN.	0.0500	Q	0.1250	0.4950	0.4950	QN	0.0500	0.1720	0.1720
7/22/2018	176	5.7	ON	0.0500	ND	0.1250	0.4890	0.4890	QN	0.0500	0.1090	0.1090
7/24/2018	145	3.7	Q.	0.0500	ND	0.1250	0.1390	0.1390	QN	0.0500	QN	0.0500
7/26/2018	143	3.1	QN	0.0500	ND	0.1250	0.2550	0.2550	QN	0.0500	0.1000	0.1000
7/28/2018	133	4.0	ND	0.0500	ND	0.1250	0.1870	0.1870	QN	0.0500	0.1050	0.1050
7/30/2018	156	3.9	QN	0.0500	ND	0.1250	QN	0.0500	QN.	0.0500	QN	0.0500
8/1/2018	129	1.1	QN	0.0500	ND	0.1250	0.3900	0.3900	1.2300	1.2300	0.3580	0.3580
8/3/2018	107	4.1	QΝ	0.0500	ND	0.1250	0.3420	0.3420	0.7380	0.7380	1.2800	1.2800
8/5/2018	101	6.5	ND	0.0500	ND	0.1250	ND	0.0500	QN	0.0500	QN	0.0500
8/7/2018	122	6.2	NΩ	0.0500	ND	0.1250	QN	0.0500	QN	0.0500	Ð	0.0500
8/9/2018	138	5.6	QN	0.0500	ΩN	0.1250	ND	0.0500	ND	0.0500	0.1170	0.1170
8/11/2018	149	4.1	*	*	*	*	*	*	*	*	*	*
8/13/2018	134	7.7	Ð	0.0500	ND D	0.1250	QN	0.0500	ND	0.0500	ON	0.0500
8/15/2018	142	6.5	Ð	0.0500	ND	0.1250	ND	0.0500	QN	0.0500	QN	0.0500
8/17/2018	135	0.9	QN	0.0500	QN	0.1250	ND	0.0500	ND	0.0500	QN	0.0500
8/19/2018	158	7.4	*	*	*	*	*	*	*	*	*	*
8/21/2018	155	5.4	Q.	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	QN	0.0500
8/23/2018	136	3.9	*	*	*	*	*	*	*	*	*	*
8/25/2018	125	5.9	QN.	0.0500	ΩN	0.1250	ND	0.0500	ND	0.0500	QN	0.0500
8/27/2018	124	6.9	Ð	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	Ð	0.0500
8/29/2018	121	4.3	QN	0.0500	ND	0.1250	ND	0.0500	Q.	0.0500	0.1120	0.1120
8/31/2018	106	4.0	*	*	*	*	*	*	*	*	*	*
9/2/2018	901	2.1	Q.	0.0500	ND PD	0.1250	QN	0.0500	0.1700	0.1700	0.3080	0.3080
9/4/2018	60	4.6	Q :	0.0500	Q	0.1250	0.1090	0.1090	1.6600	1.6600	1.9400	1.9400
9/0/2018	16	8:1	ON S	0.0500	QN :	0.1250	0.1680	0.1680	0.6980	0869:0	0.6670	0.6670
9/6/2018	120	8.4.8	QN K	0.0500	Q	0.1250	0.1760	0.1760	0.1070	0.1070	0.1150	0.1150
9/10/2016	04	3.7	QN G	0.0500	Q.	0.1250	0.1080	0.1080	1.5300	1.5300	3.5800	3.5800
9/12/2018	3 =	4.0	Q. G.	0.000	ON SE	0.1250	0.1600	0.1600	2.0500	2.0500	3.3800	3.3800
9/14/2018	122	0.1	5 5	0.0500	ON CIA	0.1250	0.1550	0.1550	2.1800	2.1800	5.1700	5.1700
9/18/2018	187	13	8 8	0.0500	S E	0.1250	0.1220	0.1320	0.5470	0.5470	0.8670	0.8670
9/20/2018	121	5.9	ND	0.0500	Q.	0.1250	ND ON	0.1320	5 5	0.0300	0.1420 ND	0.1420
9/22/2018	204	2.9	ND	0.0500	QN	0.1250	0.1510	0.1510	Q.	0.0500	2	0.0200
9/24/2018	115	4.5	ND	0.0500	ND	0.1250	0.1780	0.1780	ΩN	0.0500	2	0.0500
9/26/2018	132	2.4	ND	0.0500	ND	0.1250	0.1510	0.1510	0.4270	0.4270	0.8060	0.8060
9/28/2018	62	2.9	QN	0.0500	ND	0.1250	ND	0.0500	1.6100	1.6100	1.9400	1.9400
9/30/2018	65	2.2	S	0.0500	ND	0.1250	0.2190	0.2190	2.1300	2.1300	2.8200	2.8200
10/2/2018	92	4.7	QN	0.0500	QN	0.1250	ND	0.0500	1.2900	1.2900	2.1200	2.1200
10/4/2018	111	8. 6	Q S	0.5000	Q	1.2500	1.0900	1.0900	ND	0.5000	ND	0.0500
10/6/2018	117	7.0	ON I	0.0500	Q.	0.1250	Ð	0.0500	ND	0.0500	ND	0.0500
10/8/2018	108	7.8	QN 42	0.0500	2	0.1250	QN	0.0500	Q.	0.0500	ND	0.0500
101101-0110	<u> </u>	0:0	Q.	OUCO:O	QN.	0.120	0.7510	0.7510	0.9960	09660	0.9980	0.9980

amac	1/2 Reported LOD	(qdd)	17.7000	0.0500	0.0500	0.0500	0.0500	0.1290	*	0.0500	0.0500	0.0500	0.0500	0.0300	0.7320	0.3510	0.3180	0.0500	0.8120	*	*	1.0700	0000	0.0300	0.0500	0.3070	0,6660	1400	0.2680	*	0.3330	0.0500	*	0.2160	0.2300	0.0500	0.8980	1.5000	0.0500	0.0500	0.2550	0.0500	0.0500	0.1360	2.9000	0.1370	UNCO.	0.0500	0200
ETHYLENE DICHLORIDE	1/2 Re							1					+		+				0			+						,			0	0		0 0			0	-1	0	0	O	0	Ö) °	+	-	<i>5</i> -		
ETHYLE	Actual	(qdd)	17.7000	ND	ND	QN	QN	0.1290	*	Q E	Q £	Q S	2 5	07370	2	0.3510	0.3180	ND	0.8120	*	*	1.0700	Ę	8	03070	0.3070	0.6660	5.1400	0.2680	*	0.3330	QN.	*	3 3000	0.2230	Ð	0.8980	1.5000	ND	QV	0.2550	<u>Q</u>	QN Series	0.1360	0.1370	0.13/0 ND	1,2000	CONT.	
VINYL CHLORIDE	1/2 Reported LOD	(qdd)	5.0600	0.0500	0.0500	1.0100	1.2300	4.7800	*	0.6970	0.000	0.0300	0.0500	0.4450	0.0500	1.3200	0.8340	0.1040	0.7050	*	*	1.3400	0.050.0	0.0500	0.0500	0.0500	0.6290	1.8800	0.1260	*	0.1050	0.0500	*	0.0500	0.0500	0.4220	0.1530	0.3100	0.3400	0.0500	0.5250	0.0500	0.0500	0.0300	0.2240	0.5830	0.2050	00500	
VINYL C	Actual	(qdd)	5.0600	ND	Q.	1.0100	1.2300	*./800	0.5020	O'69'0	9	1 0300	QN	0.4450	QN	1.3200	0.8340	0.1040	0.7050	*	* .	**	S	Q	QN	Q.	0.6290	1.8800	0.1260	*	0.1050	QN	* 5	0.5950	Q.	0.4220	0.1530	0.3100	0.3400	Ð	0.5250	2 2		1.1300	0.2240	0.5830	0.2050	4	=
BENZENE	1/2 Reported LOD	(qdd)	0.4150	0.2210	0.2080	0.6560	0.3050	00000	0.2520	0.7960	0.0500	0.2610	0.1010	0.1660	0.1450	0.7920	0.4330	0.2450	0.3090	× ,	4 600	*****	0.2050	0.2100	0.1770	0.1930	0.8490	0.3790	0.3240	*	0.2460	0.1550	0.5460	0.2210	0.2790	0.7380	0.2070	0.2390	0.2920	0.3200	0.4050	0.1340	0.1540	0.4450	0.3010	0.3140	0.1990	0.2540	2
BEN	Actual	(qdd)	0.4150	0.2210	0.2080	0.6560	0.3000	*	0.2520	0.2960	QN	0.2610	0.1010	0.1660	0.1450	0.7920	0.4330	0.2450	0.3090	÷ ×	0.4500	*	0.2050	0.2100	0.1770	0.1930	0.8490	0.3790	0.3240	*	0.2460	0.1550	0.5460	0.2210	0.2790	0.7380	0.2070	0.2390	0.2920	0.3200	0.4050	0.1340	0.1680	0.4450	0.3010	0.3140	0.1990	0.2540	0+07:0
ADIENE	1/2 Reported LOD	(qdd)	0.1250	0.1250	0.1250	0.1230	0.1250	*	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.2930	0.1250	0.1250	0.1250	* *	0.1750	*	0.1250	0.1250	0.2780	0.1250	0.2780	0.1250	0.1250	* 0	0.1250	**	0.1250	0.1250	0.1250	0.2910	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	05010	0.170
1,3 BUTADIENE	Actual	(qdd)	Q !	ON A	2 5	E S	2	*	Q.	Ð	N Q	ND	ND	ND	ND	0.2930	QN	Q S	¥ *	*	Ę	*	ND	ND	0.2780	ND	0.2780	Q.	QN.	* 5	QV Q	*	ND ND	ND	ND	0.2910	QN	Q !	2 2	ON CZ	2 5	2	QN QN	ND	QN	ND	ND	CIV.	QVI
LENE	1/2 Reported LOD	(qdd)	0.0500	0.0300	0.5000	0.0500	0.0500	*	0.0500	0.0500	0.0500	0.0500	0.3310	0.3430	0.3760	0.0500	0.0500	0.0500	**	*	0.0500	*	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	*	0.0500	*	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.000	0.7090	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.5000	0.050.0	00000
ETHYLENE	Actual	(add)	ON S	2 2	2	QN	QN	×	QN	ND	ND	ND	0.3310	0.3430	0.3760	Q !	Q S	2 2	*	*	QN ON	*	QN	S.	ND	Q.	Q.	9	GN,	* 5	2 2	*	ND	ND	Q.	QN	ON SE	2 2	0.500	O.7000	2	QN	ON	QN	Ð	ND	QN	- QN	
AVG.WIND	SPEED (mph)	1.5	7.0	6.3	4.9	8.9	4.8	3.9	1.5	2.8	9.9	6.2	6.7	4.9	4.8	10.2	5.7	0.7	4.5	7.0	4.8	0.4	3.0	1.9	3.2	2.7	5.8	5.0	1.9	3.0	6.7	5.4	1.7	1.7	3.0	3.2	2.5	7.7	3.2	8.9	2.0	5.8	1.4	4.4	4.4	4.9	5.8	5.2	
AVG.WIND	(Degrees)	88	123	317	343	345	351	5	249	179	137	324	136	158	157	348	321	112	88	344	22	46	316	85	145	240	348	9 5	373	101	235	284	129	15	240	323	100	346	254	350	229	118	153	89	307	342	85	144	
SAMPLE DATE		10/12/2018	10/14/2018	10/16/2018	10/18/2018	10/20/2018	10/22/2018	10/24/2018	10/26/2018	10/28/2018	10/30/2018	11/1/2018	11/3/2018	11/5/2018	11/0/2018	11/9/2018	11/13/2018	11/15/2018	11/17/2018	11/19/2018	11/21/2018	11/23/2018	11/25/2018	11/27/2018	11/29/2018	12/1/2018	12/3/2018	12/2/2018	12/9/2018	12/11/2018	12/13/2018	12/15/2018	12/17/2018	12/19/2018	12/21/2018	12/25/2018	810272721	12/29/2018	12/31/2018	1/2/2019	1/4/2019	1/6/2019	1/8/2019	1/10/2019	1/12/2019	1/14/2019	1/16/2019	1/18/2019	

SAMPLE DATE	AVG.WIND	AVG.WIND	ЕТН	ETHYLENE	1,3 BUT	1,3 BUTADIENE	BEN	BENZENE	VINYL C	VINYL CHLORIDE	ETHYLENE	ETHYLENE DICHLORIDE
	DIRECTION	SPEED (mph)	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD
	(Degrees)		(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(pdd)	(qdd)	(qdd)	(qdd)	(qaa)
5/4/2019	266	4.4	4.6300	4.6300	ND	0.0316	0.2080	0.2080	0.5490	0.5490	0.3260	0.3260
5/6/2019	101	5.1	2.1700	2.1700	ND	0.0323	0.1360	0.1360	0.3760	0.3760	0.8690	0.8690
5/8/2019	123	9.8	0909:0	0909:0	ND	0.0321	0.1740	0.1740	ND	0.0321	QN	0.0321
5/10/2019	244	6.9	7.2300	7.2300	0.1050	0.1050	0.3290	0.3290	0.2860	0.2860	0.2500	0.2500
5/12/2019	255	5.0	3.3100	3.3100	ND	0.0326	0.1860	0.1860	0.4110	0.4110	0.7620	0.020
5/14/2019	95	5.0	3.7800	3.7800	ND	0.0317	0.2170	0.2170	1.1100	1.1100	1.8500	1.8500
5/16/2019	103	6.1	0.5220	0.5220	ND	0.0336	0.1150	0.1150	QN	0.0336	Q.	0.0336
5/18/2019	124	10.3	0.2840	0.2840	ND	0.0331	ND	0.0331	Q.	0.0331	0.0807	0.0807
5/20/2019	119	11.8	0.2910	0.2910	ND	0.0335	ND	0.0335	ND ON	0.0335	Ð	0.0335
5/22/2019	123	11.9	0.9730	0.9730	ND	0.0331	0.1150	0.1150	ND	0.0331	QN ON	0.0331
5/24/2019	113	10.2	0.1890	0.1890	ND	0.0326	0.0952	0.0952	QN	0.0326	QN	0.0326
5/26/2019	114	9.8	0.1730	0.1730	ND	0.0327	ND	0.0327	QN	0.0327	QN	0.0327
5/28/2019	130	10.1	0.3280	0.3280	ND	0.0332	ND	0.0332	ND ON	0.0332	QX	0.0332
5/30/2019	111	6.3	0.6420	0.6420	ND	0.0335	0.1380	0.1380	ND	0.0335	0.4200	0.4200
6/1/2019	122	5.2	*	*	*	*	*	*	*	*	*	*
6/3/2019	121	5.9	0.5140	0.5140	ND	0.0333	0.1340	0.1340	ND ON	0.0333	0.0939	0.0939
6/5/2019	226	4.5	1.8000	1.8000	ND	0.0330	0.1730	0.1730	0.1740	0.1740	0.0684	0.0684
6/1/2019	220	3.7	0.7340	0.7340	ND	0.0330	0.1430	0.1430	ND	0.0330	QN	0.0330
6/9/2019	145	4.7	0.2230	0.2230	ND	0.0329	0.0931	0.0931	ND	0.0329	QN QN	0.0329
6/11/2019	225	4.4	7.7000	7.7000	0.1250	0.1250	0.6450	0.6450	0.6980	0869:0	2.1500	2.1500
6/13/2019	233	2.6	2.0300	2.0300	0.1050	0.1050	0.1920	0.1920	ND	0.0401	0.2510	0.2510
6/12/2019	146	8.8	0.2230	0.2230	ND	0.0327	0.0784	0.0784	ND	0.0327	ND	0.0327
6/17/2019	157	5.1	7.0200	7.0200	ND	0.0339	0.2220	0.2220	0.2740	0.2740	7.4600	7.4600
6/19/2019	155	9.9	0.3190	0.3190	ND	0.0326	0.1860	0.1860	ND	0.0326	ND	0.0326
6/21/2019	130	0.6	0.3970	0.3970	ND	0.0322	ND	0.0322	ND	0.0322	ND	0.0322
6/23/2019	136	9.4	0.3190	0.3190	ND	0.0325	0.0712	0.0712	ND	0.0325	ND	0.0325
6/25/2019	122	5.1	5.9900	5.9900	0.0857	0.0857	0.3580	0.3580	0.5750	0.5750	2.2100	2.2100
6/27/2019	110	5.9	0.6450	0.6450	ND	0.0331	0.0665	0.0665	ND	0.0331	ND	0.0331
6/29/2019	165	4.1	1.8100	1.8100	ND	0.0329	0.1230	0.1230	0.0868	0.0868	1.1800	1.1800
		Ŀ										
			ETHY	ETHYLENE	1,3 BUT	1,3 BUTADIENE		BENZENE	VINYL C.	VINYL CHLORIDE	ETHYLENE	ETHYLENE DICHLORIDE
			Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD

	ETH	ETHYLENE	1,3 BU	1,3 BUTADIENE	BEN	BENZENE	VINYL C	VINYL CHLORIDE	ETHYLENE	ETHYLENE DICHLORIDE
	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD
	(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qaa)
Year-To-Date Sum	119.5470	127.4470	6.3507	22.8224	32.2438	34.2935	56.2588	60.8459	113.8870	117.1842
Rolling Year Average	0.7970	0.8496	0.0423	0.1521	0.2150	0.2286	0.3751	0.4056	0.7592	0.7812
Annual Average	1.7322	1.7645	0.0766	0.1424	0.2022	0.2095	0.2305	0.2517	0.6154	0.6344
Number of theoretical sample periods Number of non operational sample periods	182	182	18 <u>2</u> 32	182	182	182 32	182	182 32	182 32	182

^{* -} non operational, data from the North site was used for Wind Direction and Wind Speed, if available

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Investigation	Limit (ppb)	25	29.7	28.2	200	25
Values (ppb)	LT	0.47	0.72	1.4	30	6
TCEQ Air Monitoring Comparison Values (ppb)	ST	27,000	94	180	200,000	1,700
TCEQ Air Mo	Chemical	Vinyl Chloride	Ethylene Dichloride	Benzene	Ethylene	1, 3 Butadiene

150.0000

No. 10 N	SAMPLE DATE	AVG.WIND	AVG.WIND	ЕТН	ETHYLENE	1,3 BU	1,3 BUTADIENE	. 11	BENZENE	VINYL	VINVI, CHI, ORIDE	ETHYI ENE DICHI OBINE	ICHIOPIDE
100 100		DIRECTION	SPEED (mph)	Actual	1/2 Reported LOD	Actual	1/2 Renorted LOD	1	1/2 Penarted I On	Actual	10 Personal I On	Taractic	10 P
150 150		(Degrees)		(qdd)	(pdd)	(qdd)	(dqq)	(ppb)	(qad)	Actual (pob)	1/2 Keported LOD (nnh)	Actual (nph)	1/2 Keported LOD
	07/04/18	130	2.8	ΩN	0.5000	ND	1.2500	£	0.5000	ND	0.5000	10.3000	10 3000
	07/04/18 _d	130	- 1	QN	0.5000	ND	1.2500	S.	0.5000	QN	0.5000	9.4900	9.4900
	Relati	ve Percent Difference	(RPD)		ND				П			1	1
	07/08/18	191	2.8	QN	0.0500	ND	0.1250	0.1930	0.1930	ND	0.0500	ND	0.0500
	U //U8/18 _d	101	- 1	*	*	*	*	*	*	*	*	*	*
184 184	Relati	ve Percent Difference	(RPD)										
1,12, 1,12	9114116	130	1 7	ď.	00000	4		!					
	07/14/18	138	100		0.0000	S S	0.1250	2 2	0.0500	Q S	0.0500	8	0.0500
1, 10, 10, 10, 10, 10, 10, 10, 10, 10,	Doloti	Donount Differences	Т		İ	ľ		١	ı		1		
16.5 16.5	The state of the s	TO TOTAL PHILOTOPIE	(G N)		- ON				ND		Q.	z	
	07/20/18	163	5.9	ND	0.0500	ND ND	0.1250	0.4950	0.4950	Q	00500	0.1720	0.1720
123 123	07/20/18 _d	163	- 1	ND	0.0500	ΩN	0.1250	0.1070	0.1070	QN	0.0500	0.1370	0.1370
1.50 1.50	Relati	ve Percent Difference	(RPD)		QN.	1	Q.	128	8.9037	1	Ш	1	
1.15 1.15	81170120	57.		41.6	2000				-				
12 12 12 13 13 13 13 13	07/26/18	143		Q !	0.0500	Q	0.1250	0.2550	0.2550	QN	0.0500	0.1000	0.1000
122 113	U//26/18 _d	143					ı	- 1	- 1			ı	
129 129 129 129 129 1290 12900 12300	uciati	A LEICEIN DINEIEING	(MTD)		UND IND		ON THE	61-	5.4373		Ą	-152.	3965
1.20 1.10	08/01/18	961		CN	00500	Ę	01050	0000	00000	0000			
12 6.2 ND 0.1250 0.1650 ND 0.1250 0.1650 ND 0.1250 0.16	08/01/18	129		GN	0.0000	2 5	0.1230	0.3900	0.3900	1.1300	1.2300	0.3580	0.3580
122 6.2 ND 0.0500 ND 0.1250 ND 0.0500 ND 0.0500 ND 0.0500 ND ND 0.0500 ND ND ND ND ND ND ND	Relati	ve Percent Difference			1					1	1	- 1	- 1
122 6.2 6.2 ND 0.0500 ND 0.1250 ND 0.0500 0.0500 ND 0.0500 0.											100	C.12	760
122 6.5 ND 0.05500 ND 0.05500 ND 0.05500 ND 0.05500 ND ND ND ND ND ND ND	08/07/18	122	6.2	ND	0.0500	ND	0.1250	ND	0.0500	QN	0.0500	QN	0.0500
142 65 ND 0.0500 ND 0.1250 ND 0.05500	08/07/18 _d	122	- 1	ND	0.0500	QN	0.1250	QN	0.0500	QN	0.0500	Ð	0.0500
142 65	Relati	ve Percent Difference	(RPD)		ND		Q,	7	ND	1	$ \ $		
142 6.5 6.5 ND 0.05500 ND 0.1250 ND 0.05500 0.05500 ND 0.05500 ND 0.05500 ND 0.05500 ND 0.05500 0.	91751780		-	A. C.	00000								
15 15 15 15 15 15 15 15	08/15/18,	142	6.5	S	0.0500	S E	0.1250	2 2	0.0500	9	0.0500	Q S	0.0500
155 5.4 ND 0.0500 ND 0.1250 ND 0.0500 0.	Relati	ve Percent Difference	1			l	1		1				1
155 5.4 ND 0.0500 ND 0.1250 ND 0.0500							=		- CAN		9	Z	
155 5.4 ND 0.0500 ND 0.1250 ND 0.0500 ND ND ND ND ND ND ND	08/21/18	155	5.4	QN	0.0500	ND	0.1250	ND	0.0500	Ð	0.0500	ND	0.0500
1.25 5.9 ND 0.05500 ND 0.1250 ND 0.05600 ND 0.1250 ND 0.05600 ND 0.05600 ND 0.1250 ND 0.05600 ND 0.1250 ND 0.05600 ND 0.1250 ND 0.1250 0.1680 0.1	08/21/18 _d	155	- 1	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
125 5.9 ND 0.0500 ND 0.1250 ND 0.0500 ND 0.0500 ND 0.0500 ND 0.0500 ND ND 0.0500 ND ND ND ND ND ND ND	Relati	ve Percent Difference	(RPD)		Q	1	ď		ND		ξĐ	Z	
elative Percent Difference (RPD) ND 0.0500 ND ND 0.1580 0.1680 0.1680 0.6580 0.6580 0.6570 ND elative Percent Difference (RPD) 1.8 ND 0.0500 ND 0.1250 0.1680 0.6580 0.6580 0.6570 ND elative Percent Difference (RPD) ND 0.1250 0.1600	08/25/18	125	5.9	ND	0.0500	QN	0.1250	CN	0.0500	2	00800	Ę	00500
Selative Percent Difference (RPD) ND ND 0.1250 0.1680 0.1680 0.6680 0.6670 ND Selative Percent Difference (RPD) 1.8 ND 0.0550 ND 0.1250 0.1680 0.6680 0.6580 0.6570 0.6570 Selative Percent Difference (RPD) ND 0.0550 ND 0.1250 0.1600 0.1600 0.1600 0.1600 2.0500 2.0500 3.3800 1.4700 3.3800 1.4700 1.4900 3.8400 1.17742	08/25/18 _d	125	1	QN	0.0500	QV.	0.1250	2	0.0500	2 2	0.0500	2 5	0.0300
91 1.8 ND 0.0550 ND 0.1250 0.1680 0.1680 0.6980 0.6980 0.6670 7 elative Percent Difference (RPD) 1.8 ND ND 0.1250 0.2100 0.2100 0.6580 0.6580 0.6510 2.4279 60 4.6 ND 0.0500 ND 0.1250 0.1600 0.1600 2.0500 2.0500 3.8800 elative Percent Difference (RPD) ND 0.0500 ND 0.1250 0.1600 0.1600 2.0500 2.0500 3.8800 1.4900 3.8400 1.27.424	Relati	ve Percent Difference	1 1				İ		ı				
1.8 N.D 0.0500 N.D 0.1250 0.1680 0.1680 0.6580 0.6580 0.6570 0.6570	01120100		1 1	12									
blative Percent Difference (RPD) ND 0.1250 0.1250 0.1600 <td>09/06/18</td> <td>16</td> <td>0.1 ×</td> <td>ON CN</td> <td>0.0500</td> <td>2 2</td> <td>0.1250</td> <td>0.1680</td> <td>0.1680</td> <td>0.6980</td> <td>0869.0</td> <td>0.6670</td> <td>0.6670</td>	09/06/18	16	0.1 ×	ON CN	0.0500	2 2	0.1250	0.1680	0.1680	0.6980	0869.0	0.6670	0.6670
Column C	Relativ	ye Percent Difference			l			1	- 1	- [- 1	
60 4.6 ND 0.0500 ND 0.1250 0.1600 0.1600 2.0500 2.0500 3.3800 elative Percent Difference (RPD) 4.6 ND 0.0500 0.1250 0.1050 0.1050 1.4900 1.4900 3.8400 1.2.7424			(2.11)					77-	777777	2.2	8997	2.4.	79
60 4.6 ND 0.0500 ND 0.1250 0.1050 0.1050 1.4900 1.4900 3.8400 elative Percent Difference (RPD) ND ND 41.5094 31.6384 1.6384 1.12.7424	09/12/18	09		ND	0.0500	ND	0.1250	0.1600	0.1600	2.0500	2.0500	3.3800	3 3800
ND ND 41.5094 31.6384 .12.7424	09/12/18 _d	09		QN	0.0500	ND	0.1250	0.1050	0.1050	1.4900	1.4900	3.8400	3.8400
	Relati	ve Percent Difference	(RPD)	I	ΠN	4		ı	l	1	1	1	

DIRECTION SPEI	Actual (ppb) (1320	112 Reported LOD (ppb) 0.1320 1.320 0.1510 0.1460 1.0900 1.0900 1.0900 1.0308 0.2080 0.2080 0.2080 0.2080 0.2080 0.2080 0.2080 0.2080 0.2080 0.2080 0.2080 0.2080 0.2080 0.2080 0.2080 0.2080	Actual (ppb) ND * ND	250 (2000) D (0.0500) D (0.0500) E (2000) E (200	Actual 1/2 Reported	1/2 Reported LOD (Ppb) (
137 1.3 N.D 0.0500 N.D 1.3 N.D 0.0500 N.D 1.3 N.D 0.0500 N.D N.D N.D 0.0500 N.D N.D N.D 0.0500 N.D 0.0500 N.D N.D 0.0500 N						
187 13		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				
132 2.4 ND 0.0500 ND ND Celative Percent Difference (RPD) Celative Percent Difference (
132 2.4 ND 0.0500 ND ND						
132						
111 4.8 ND 0.0500 ND ND O.0500 ND O.0500 ND O.0500 ND O.0500 O						
111 4.8 ND 0.5000 ND ND ND ND ND ND ND						
111 4.8 ND 0.5000 ND						
111						
344 3.8 ND 0.0500 ND ND ND ND ND ND ND						
344 3.8 ND 0.0500 ND ND						
elative Percent Difference (RPD) ND 0.0500 ND ND elative Percent Difference (RPD) 6.3 ND 0.0500 ND ND elative Percent Difference (RPD) 4.8 ND 0.0500 ND ND elative Percent Difference (RPD) 2.8 ND 0.0500 ND ND elative Percent Difference (RPD) 2.8 ND 0.0500 ND ND elative Percent Difference (RPD) 0.3360 0.3310 ND 0.4800 -117.3554 elative Percent Difference (RPD) 1.14993 1.14993 ND -117.3554			1 1 1 1 1 1 1 1 1 1 1 1 1			
Stative Percent Difference (RPD)						1111
clative Percent Difference (RPD) 6.3 ND 0.0500 ND clative Percent Difference (RPD) 4.8 ND 0.0500 ND clative Percent Difference (RPD) 2.8 ND 0.0500 ND clative Percent Difference (RPD) * * * clative Percent Difference (RPD) 0.3310 0.03310 ND clative Percent Difference (RPD) 0.3360 0.3360 0.04800 clative Percent Difference (RPD) .1.4993 .117.3554 clative Percent Difference (RPD) * *						
Si						
351 4.8 ND 0.0500 ND		1 1 1 1 1 1 1 1				0
351 4.8	0.2050	0.3050 * 0.2960	4.7800 *	4.7800	0.1290	
351 4.8	* 0.1010	**	*		,	0 1290
179 2.8	* * * * * * * * * * * * * * * * * * * *	0.2960		*	*	*
179 2.8	**	0.2960			5	
179 2.8	*	*	ND	0.0500	QX	0.0500
136 6.7 0.3310 0.3310 ND	0.1010		*	*	*	*
136 6.7 0.3310 0.3310 ND 136 6.7 0.3360 0.3360 0.4800 136 6.7 0.3360 0.4800 137 17.3554 24 6.2 ND 0.0500 ND 24 6.2 * * * * * * * * * * * * * * * * * *	0.1010					
136 6.7 0.3360 0.4800	****	0.1010	ND	0.0500	2	0.0500
117.3554	ND	0.0500	ND	0.0500	QN	0.0500
24 6.2 ND 0.0500 ND * * * * * *	29	67.5497		ND	QN	Н
telative Percent Difference (RPD)	0.4330	0.4330	0.8340	0.8340	0.3180	0.3180
telative Percent Difference (RPD)	*	*	*	*	*	*
88	*	*	*	*	*	*
11/17/18 ₄ 88 4.5 * * * * * *	*	*	*	*	*	*
Relative Percent Difference (RPD)						
	*	*	*	*	*	,
* * * *	*	*	*	*	*	* *
Relative Percent Difference (RPD)						
145 3.2 ND 0.0500 0.2780	0.1770	0.1770	CN CN	00500	0.3070	0.3070
11/29/18 ₄ 145 3.2 ND 0.0500 0.2940 0.2940	0.2170	0.2170	QN	0.0500	0.3340	0.3070
ND -5.5944]	-20.3046		QN QN	-8.4243	11
UN 00500 UN 1:9	0.3240	0.3240	0.1260	01260	0.3680	0.3680
102 1.9 ND	0.2100	0.2100	0.6580	0.6580	0.6510	0.6510
Relative Percent Difference (RPD) ND ND		42.6966	1	-135.7143	-83 3515	1

ETHYLENE DICHLORIDE	1/2 Reported LOD	(qdd)	0.0500	ND ON		0.0500	0.0500	ND	1 3500	*			*	4		*	*	*		* >	•	*	*		0.4780	0.4220	1.4118		0.1800	*		1.0400	1.0300	0.9662	0.0321	0.0309	ND	1 0000	1.8500	6.7039	0.0335	4.0333		0.0327	175070 *	
ETHYI ENE	Actual	(qdd)	ON CN			ND	ND	2	1.3500	*			* >			*	*			ж н		*	*	4	0.4780	0.4220			0.1800	×		1.0400	1.0300	6.0	QN	QN		1 0500	1.8300		2	WI *	v	CN.	**	
VINYL CHLORIDE	1/2 Reported LOD	(gdd)	0.0500	ND	П	0.3870	0.4260	-9.5941	0.6240	*			* *			*	*			* *		*	*	i	0.3500	0.3250			0.7020			0.2250	0.2300	8/6	0.0321	0.0309	D	11100	1.0600		0.0335	**		0.0327	**	
VINYL C	Actual	(add)	QN QN			0.3870		-9.5	0.6240	*			* *	*		*	*	*	,	÷ *		*	*	Č.	0.3500	0.3250	7.4074		0.7020	•		0.2250	0.2300	-2.1978	ND	ND	QN	1 1100	1.0600	4.6083	CN	*	74.7	QN	*	10.0
ENE	1/2 Reported LOD	0.0500	0.0500			0.2820	0.2870	575	0.4200	*			* *			*	*		,	*		*	*	ī	0.1820	0.1650			0.2560			0.1050	0.0978	9	0.1740		162	02170	0.2170		0.0335	*		0.0327	*	
BENZENE	Actual	ND	QN	ON		0.2820	- 1	-1.7575	0.4200	*			* *	*		*	*	*	э	*	110	*	*		0.1820	0.1650	9.7983		0.2560			0.1050		7.1000	0.1740		38.3562	0.2170	0.2170	0.0000	QN	*		N N	*	
1,3 BUTADIENE	1/2 Reported LOD	0.1250	0.1250	ND		0.1250		QN	0.0500	*		1	* *			*	*		16	*		*	*		0.0337	0.0326		00000	0.0308			0.0324			0.0321		Q	0.0317	0.0303	Q	0.0335	*		0.0327	*	
1,3 BUTAD	Actual (nnh)	ND	ND	Z		S		Z	ND	*		÷	* *	*		*	*	*	*	*	4	*	*	J.	QN	NO ON	QN	4.5	ND *	4100		ND	ON ON	X.	ON		QN	QN	ND	ON	QN	*	1.5	ND	*	5
ETHYLENE	1/2 Reported LOD	0.0500	0.0500	ND	00000	0.0300		ON ON	16.7000	*		я	*	*		*	*	*	*	*		* 1	+		5.8600	5.3100	9.8478	00000	***************************************			1.6600	1.9800		0909:0		-36.2162	3.7800	3.8200	-1.0526	0.2910	*		0.1730	*	
ETHY	Actual (pob)	ND	ND	2	di.	S S			16.7000	*		*	*			*	*		*	*	10.	w ,			5.8600	5.3100	8.6	00000	**			1.6600	1.9800		0.6060		-36.	3.7800	3.8200	-1.0	0.2910	*	7 10 1	0.1730	*	Y
AVG.WIND	SPEED (mph)	6.4	6.4	(RPD)	Co	8.0	-	(NrD)	2.8	2.8	RPD)	5.4	5.4	1	11 II	5.3		RPD)	5.0	5.0	1 1	9.9		WED)	5.1		RPD)	4.2	4.2		11	7.7			8.6	- 1	RPD)	5.0	5.0	RPD)	11.8	1 1			9.8	RPD)
AVG.WIND	DIRECTION (Degrees)	131	131	Relative Percent Difference (RPD)	340	340	Polotive Persont Difference (DBD)	a reiceilt Dinereilce	100	100	Relative Percent Difference (RPD)	90	206	Relative Percent Difference (RPD)		87	87	Relative Percent Difference (RPD)	263	263	Relative Percent Difference (RPD)	2/1	Relative Percent Difference (PPD)	a circuit Dillicielle	111	111	Relative Percent Difference (RPD)	210	219	Relative Percent Difference (RPD)		94	Relative Percent Difference (RPD)		123	123	Percent Difference (95	95	Relative Percent Difference (RPD)	119	119	Relative Percent Difference (RPD)	05/26/19 114	114	Percent Difference (
SAMPLE DATE		03/09/19	03/09/19 _d	Relative	03715710	03/15/19,	Dolotive	Velativ	03/21/19	03/21/19 _d	Relative	03/77/19	03/27/19 _d	Relative		04/02/19	04/02/19 _d	Relative	04/08/19	04/08/19 _d	Relative	04/14/19	Relative	Walan	04/20/19	04/20/19 _d	Relative	0175/10	04/26/19,	Relative		05/02/19	Relative		05/08/19	05/08/19 _d	Kelative	05/14/19	05/14/19 _d	Relative	05/20/19	05/20/19 _a	Relative	05/26/19	05/26/19 _d	Relative

FORMOSA VOC CANISTER ANALYSIS

2nd QUARTER 2019
POINT COMFORT - PC SITE
DUPLICATE SAMPLE SCHEDULE

DIRECTION SPEED (mpb) Actual 1/2 Reported LOD 1/2 Reported Reported LOD 1/2 Reported LOD	SAMPLE DATE	AVG.WIND	AVG.WIND	ETH	ETHYLENE	1,3 BUT.	3 BUTADIENE	BEN	BENZENE	VINYL C	VINYL CHLORIDE	ETHYLENE	ETHYLENE DICHLORME
122 5.2 2.2		DIRECTION	SPEED (mph)	Actual	1/2 Reported LOD		1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Renorted LOD
122 5.2 ** ** ** ** ** ** **		(Degrees)		(qdd)	(pdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qaa)	(qaa)	(quu)	(quu)
122 52 52 5 5 5 5 5 5 5													Cara
122 5.2	06/01/19	122	5.2	*	*	*	*	*	*	*	*	ж	,
1.200 3.7 2.00 3.7 2.00 2.000 0.1050 0.1050 0.1430 0.14	06/01/19 _d	122	5.2	*	*	*	*	*	*	*	*	*	F 34
220 3.7 ***	Relati	ve Percent Difference	(RPD)					1.11					
220 3.7 ** ** ** ** ** ** **													
Feature Percent Difference (RPD)	06/07/19	220	3.7	0.7340	0.7340	NO ON	0.0330	0.1430	0.1430	QN.	0.0330	S	0.0330
12 2.5 2.0300 2.0300 0.1050	06/07/19 _d	220	3.7	*	*	*	*	*	*	*	*	ş *	0.0330
2.33 2.6 2.0300 2.0300 0.1050 0.1050 0.1920 0.1920 0.1920 ND 0.0401 0.2510 1.5450 1.3600 ND 0.0366 0.1670 ND 0.0366 0.2150 1.5450 1.3600 1.3600 ND 0.0326 0.1860 0.1860 ND 0.0326 0.1940 ND 0.0319 1.3450 1.3	Relativ	ve Percent Difference	(RPD)										
233 2.6 1.3600 2.0300 0.1050 0.1050 0.1920 0.1920 ND 0.0401 0.2510 1.5450 1.3600 ND 0.0366 0.1670 0.1670 ND 0.0366 0.2150 1.54506 1.3600 ND 0.0366 0.1860 0.1860 ND 0.03190 ND 0.03190 0.1940 0.1940 0.1940 ND 0.1940 0.194													e e
List List	06/13/19	233	2.6	2.0300	2.0300	0.1050	0.1050	0.1920	0.1920	S	0.0401	0.2510	01500
Interpretative Percent Difference (RPD) 39.5280 ND 96.6102 13.9276 ND ND 15.4506 Interpretative Percent Difference (RPD) 6.6 0.3190 ND 0.0326 0.1860 ND 0.0326 ND 15.4506 Interpretative Percent Difference (RPD) 6.6 0.4360 ND ND 0.0326 ND 0.0319 0.1040 ND 10.4538 10.4538 10.4538 10.1040 ND 10.04538 10.1045 10.04538 10.04538 10.04538 10.04538 10.04538 10.04538 10.04538 10.04538 10.04538 10.04538 10.04538 10.04538 10.04538 10.04538 10.04538 10.04538 10.04538 10.04538 10.04538 10.04539 10.04549	6/13/19 _d	233	2.6	1.3600	1.3600	ND	0.0366	0.1670	0.1670	Q.	0.0366	0.2150	0.2150
155 66 0.3190 0.3190 ND 0.0326 0.1860 ND 0.0326 ND 0.0326 ND 0.1940 ND 0.1940 ND 0.0319 ND 0.1040 ND	Relati	ve Percent Difference	(RPD)	39.	.5280	9.96	102	13.	9276		r		
155 6.6 0.3190 0.3190 ND 0.0326 0.1860 0.1860 ND 0.0326 ND 0.0326 ND 0.1940 ND 0.1940 ND 0.0319 ND 0.1040 ND 0.1													200
155 6.6 0.4360 0.4360 ND 0.0319 0.1940 ND 0.1940 ND 0.0319 0.1040 ND 0.0319 0.1040 ND 0.1040 ND 0.1040 0.1040 ND 0.1040	91/61/90	155	9:9	0.3190	0.3190	N	0.0326	0.1860	0.1860	QN	0.0326	S	0.0326
relative Percent Difference (RPD) -30.9934 ND April 104.5388 ND -4,2105 ND -104.5388 -104.5488	96/19/19 _d	155	9.9	0.4360	0.4360	S S	0.0319	0.1940	0.1940	SA SA	0.0319	0.1040	0.1040
122 5.1 5.9900 5.9900 0.0857 0.03580 0.3580 0.5750 0.5750 2.2100 1.2 5.8600 5.8600 0.0887 0.0370 0.3370 0.3570 0.5520 2.2500 1.7937	Relativ	ve Percent Difference	(RPD)	-30	.9934	Z	D	4.	2105	2	ŀ		Ш
122 5.1 5.9900 5.9900 0.0857 0.0857 0.3580 0.3580 0.5750 0.5750 2.2100 122 5.1 5.8600 5.8600 0.0887 0.0370 0.3370 0.5520 0.5520 2.2500 Relative Percent Difference (RPD) 2.1941 3.4404 6.0432 6.0432 4.0816 1.7937													0000
122 5.8600 5.8600 0.0887 0.03370 0.3370 0.5520 2.2500 cleative Percent Difference (RPD) 3.1404 6.0432 4.0816 1.17937	06/25/19	122	5.1	5.9900	5.9900	0.0857	0.0857	0.3580	0.3580	0.5750	0.5750	2.2100	22100
2.1941 -3.4404 6.0432 4.0816 -1.7937	6/25/19 _d	122	5.1	5.8600	5.8600	0.0887	0.0887	0.3370	0.3370	0.5520	0.5520	2.2500	2.2500
	Relati	ve Percent Difference	(RPD)	2.	1941	-3.4	404	0.9	1432	4.0	816	-	

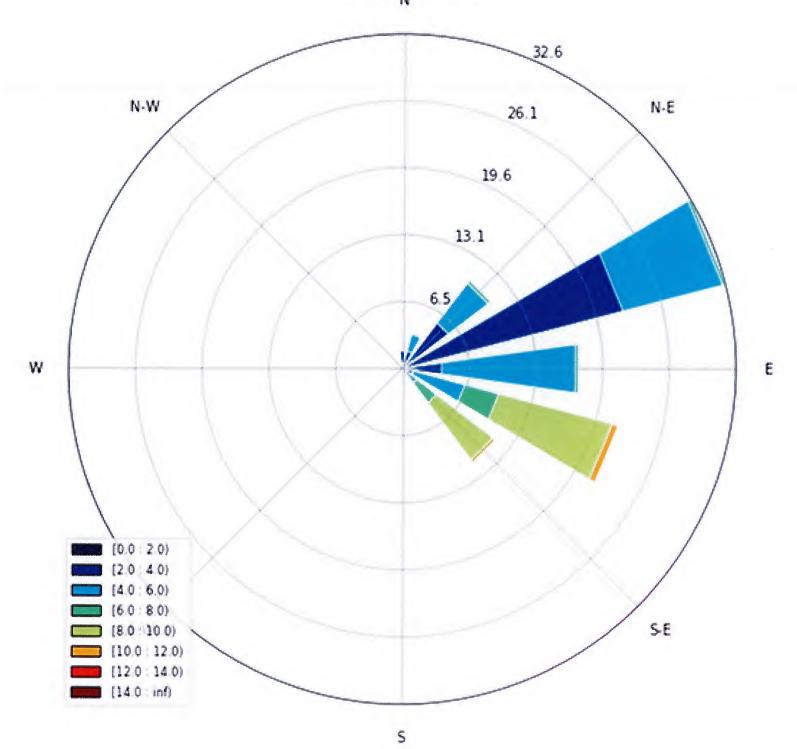
d - Duplicate sample taken in addition to the routine sample (See Calculation Methodology for information on inclusion of duplicate sample results.)

^{* -} non operational, data from the North site was used for Wind Direction and Wind Speed, if available

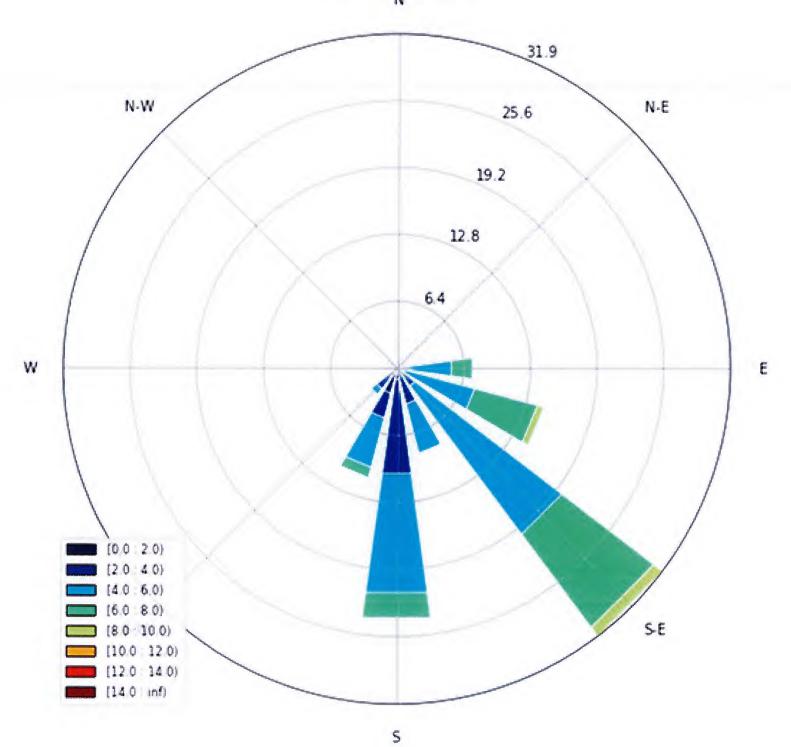
Summary of Non-operational Periods 2nd QUARTER 2019 Point Comfort SUMMA Canister System

20 13 0 110			
SUMIMA SITE	Date (s)	Description of Problem	Corrective Action
PC & PC(duplicate)	4/2/19		
PC	4/4/19		
PC	4/6/19		
City Hall, Formosa Training Complex, & Park	4/6/19		Orioinal lah could not keen un with the amount of SHIMMA conjeture needed The
PC & PC(duplicate)	4/8/19	N. S. M. S.	lab notified us and stated they would no longer provide services to us. Sample
PC	4/10/19	INO SUMIMA cans available.	results for the canister they had were delayed which left us without SUMMA
PC	4/12/19		canisters until another lab could be arranged.
City Hall, Formosa Training Complex, & Park	4/12/19		
PC & PC(duplicate)	4/14/19		
PC	4/16/19		
PC (duplicate)	4/26/19	Duplicate sample valve was not opened by shift safety during installation.	
City Hall & Park	4/30/19	Canisters were received from lab with low pressure. Additional Cans were unavailable.	Lab was notified of the issue.
PC (duplicate)	5/20/19	Voided sample due to low pressure.	
PC (duplicate)	5/26/19	Analyst Voided Sample.	
City Hall (duplicate)	5/30/19	Sample leaked prior to run.	
PC & PC(duplicate)	6/1/19	Samples did not run due unknown reasons.	AECOM was unable to verify the cause. Next run was successful.
PC (duplicate)	6///19	No SUMMA cans available due to false FTIR alarm.	Spectrum adjusted alarm setup to prevent future occurences.

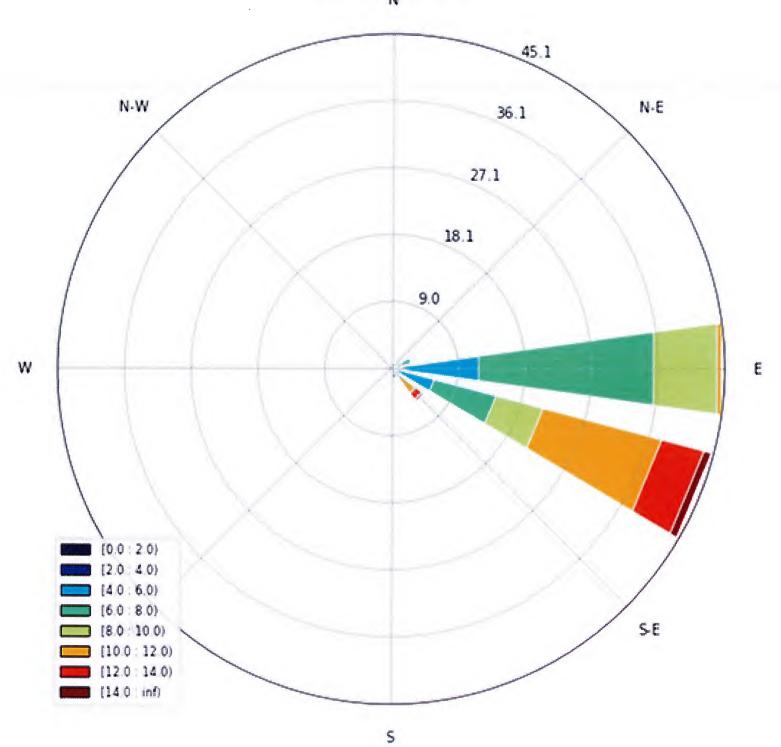
FPC: April 2 2019



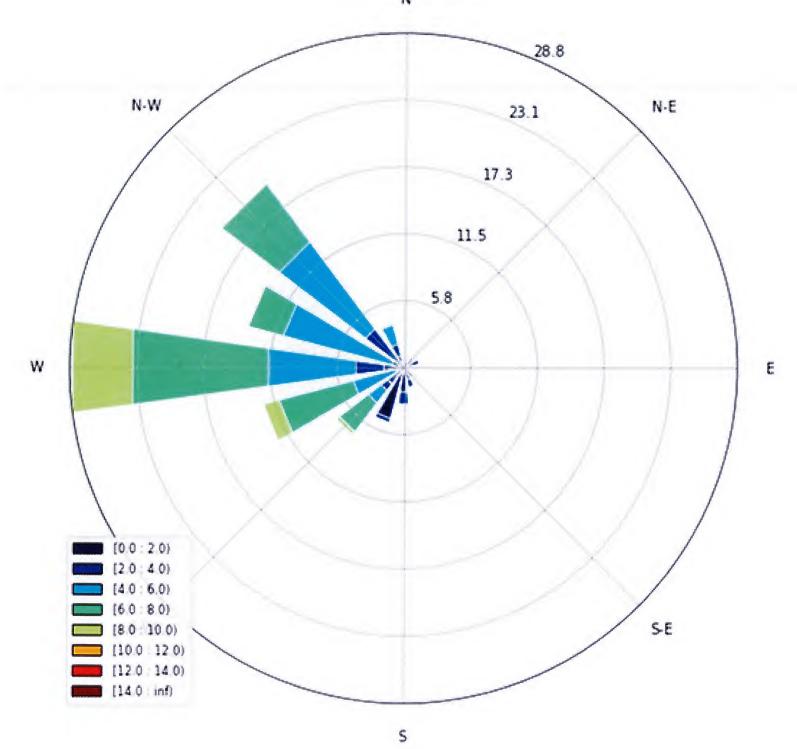
FPC: April 4 2019



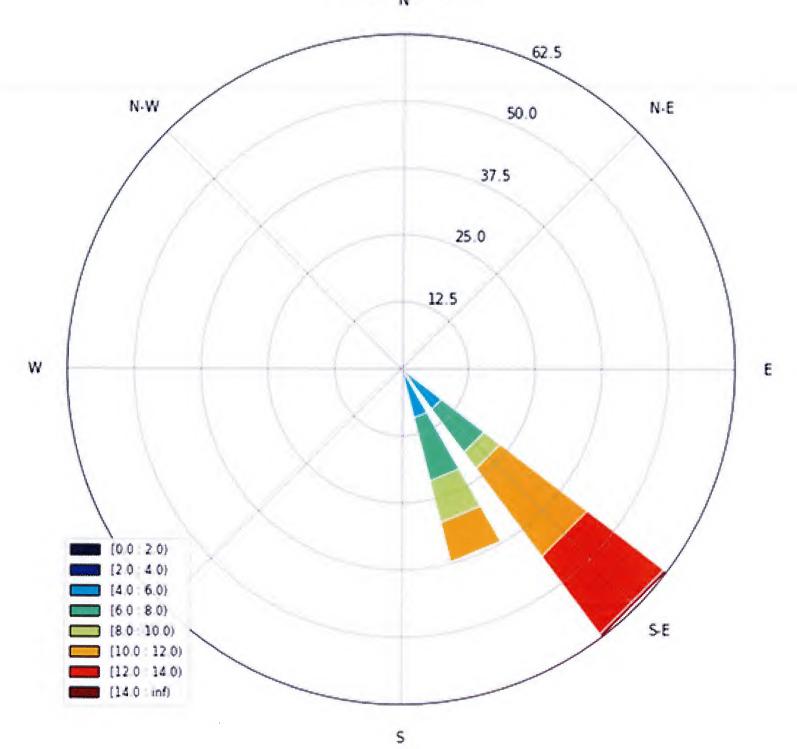
FPC: April 6 2019



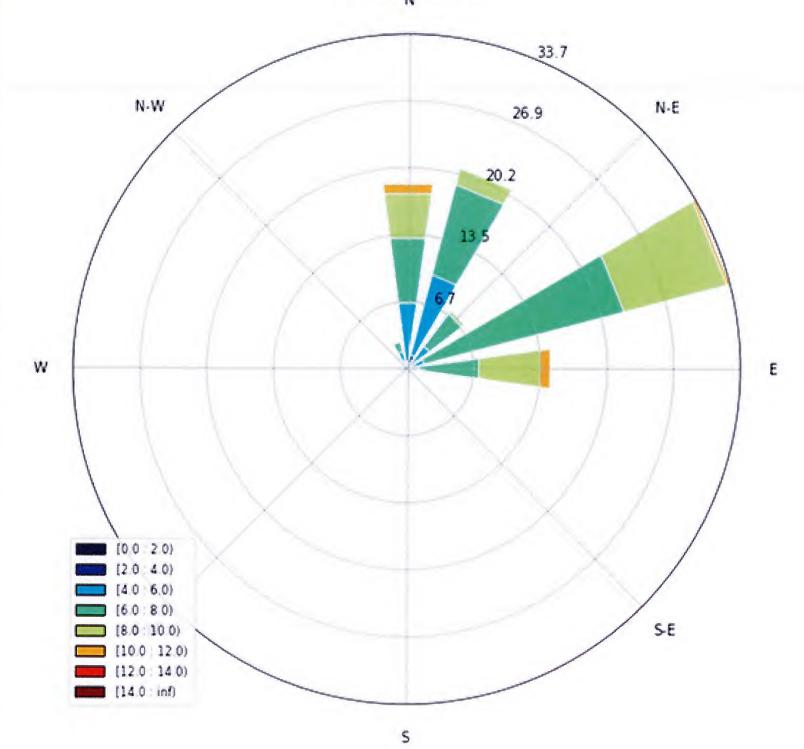
FPC: April 8 2019



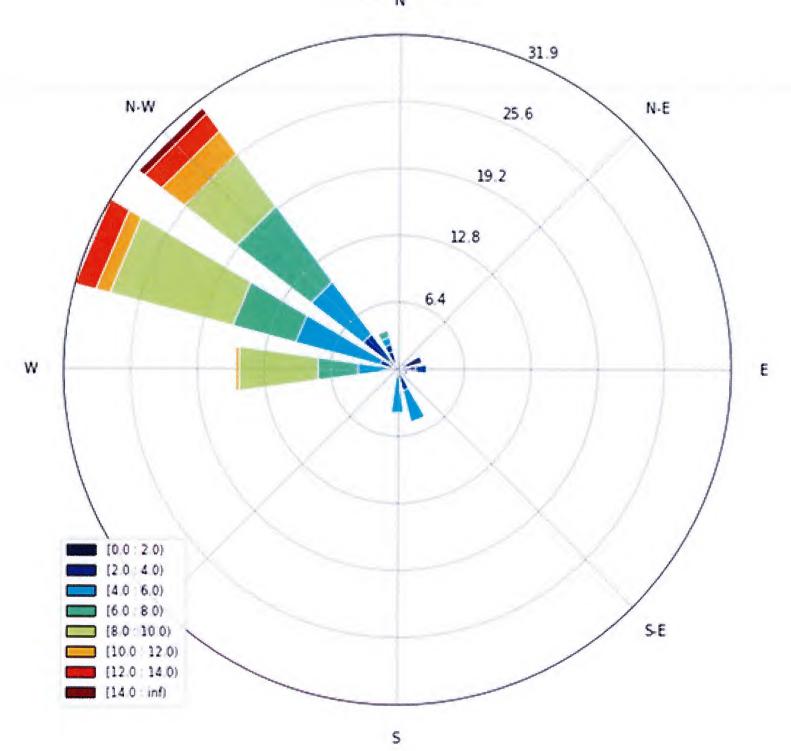
FPC: April 10 2019



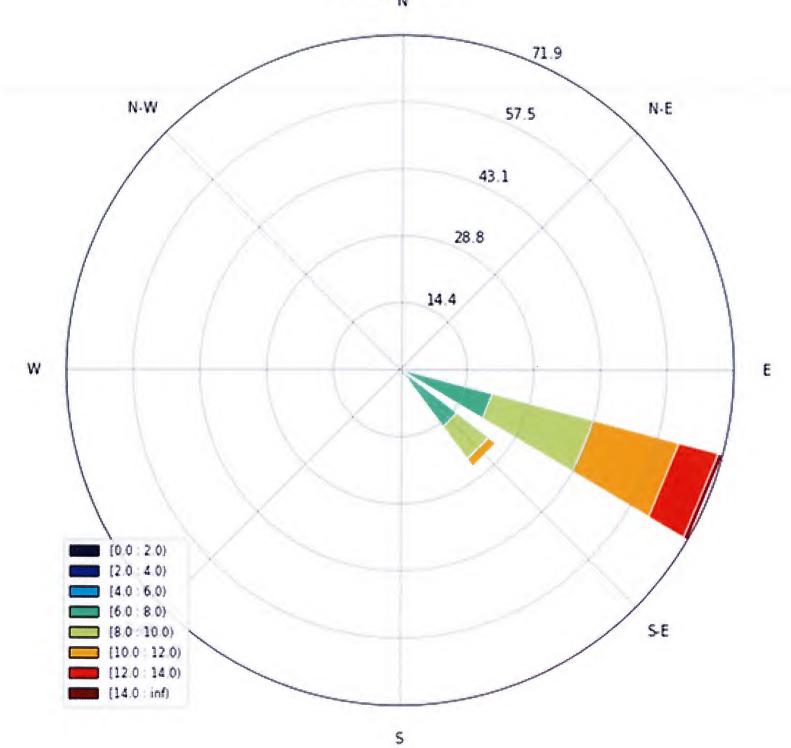
FPC: April 12 2019



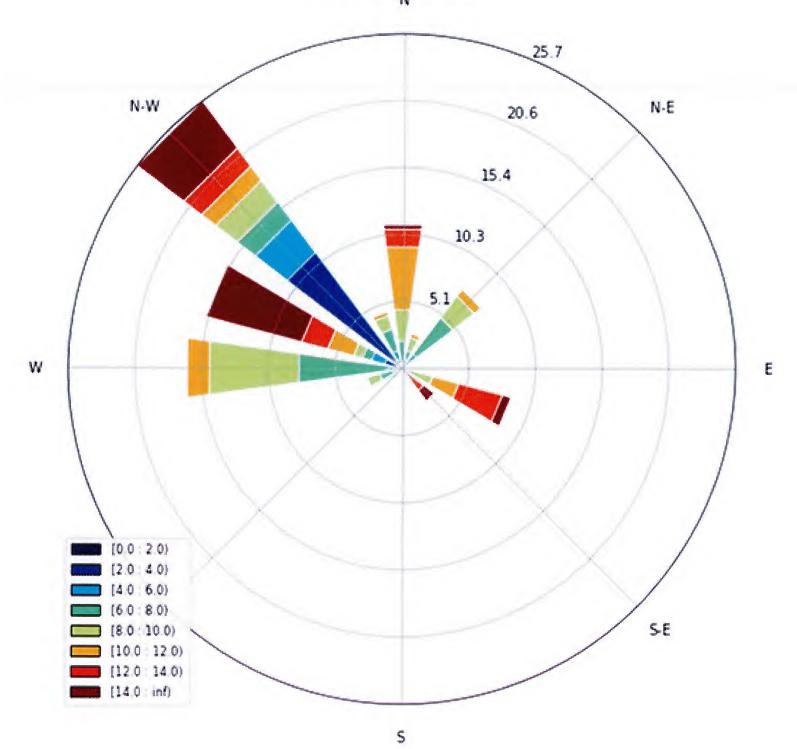
FPC: April 14 2019



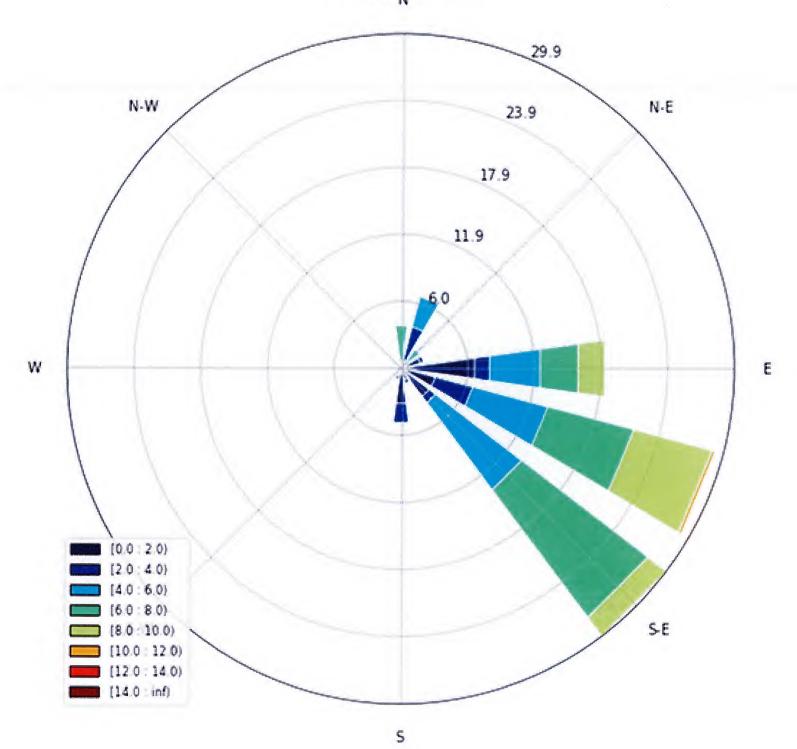
FPC: April 16 2019



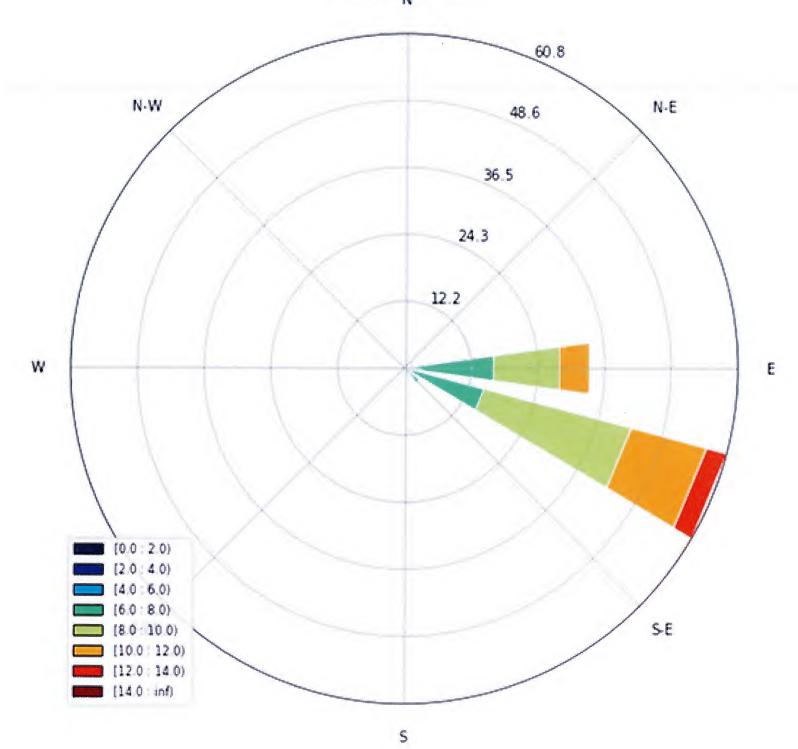
FPC: April 18 2019



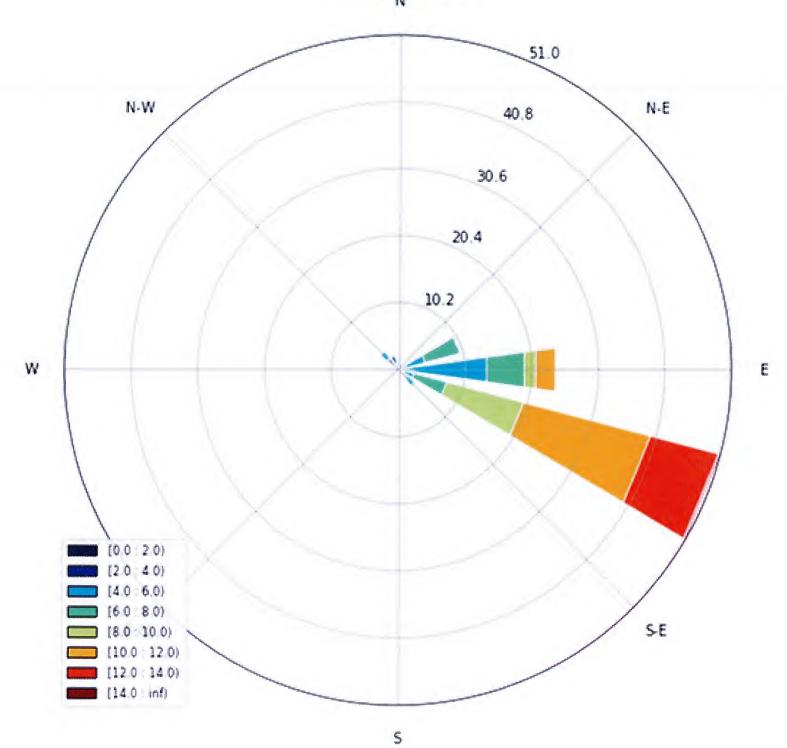
FPC: April 20 2019



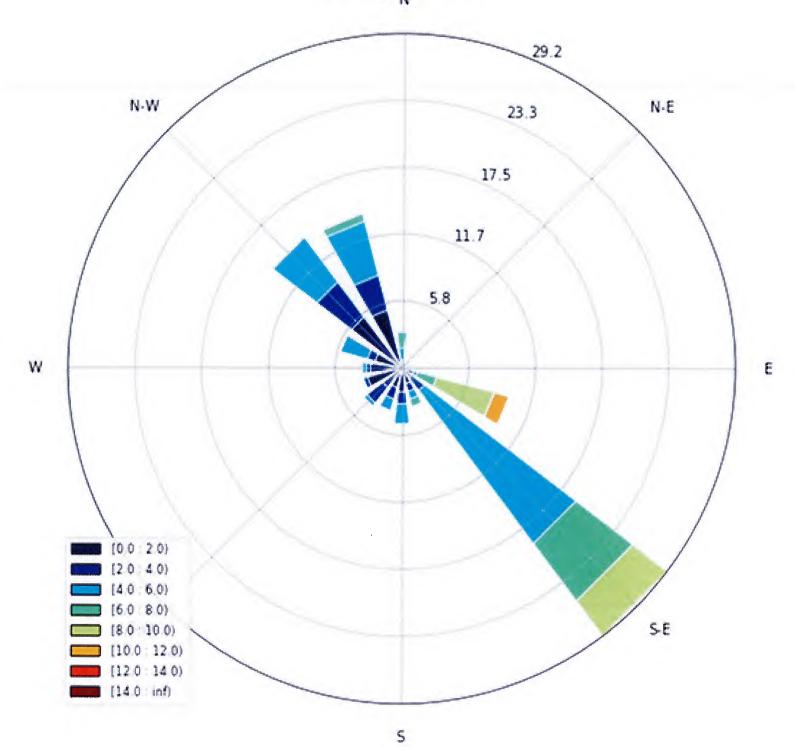
FPC: April 22 2019



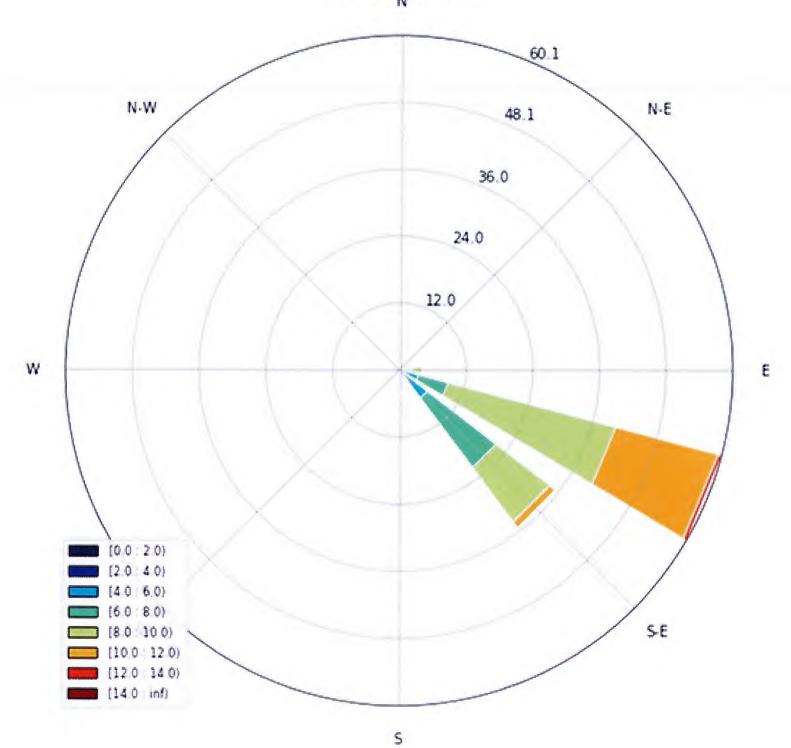
FPC: April 24 2019



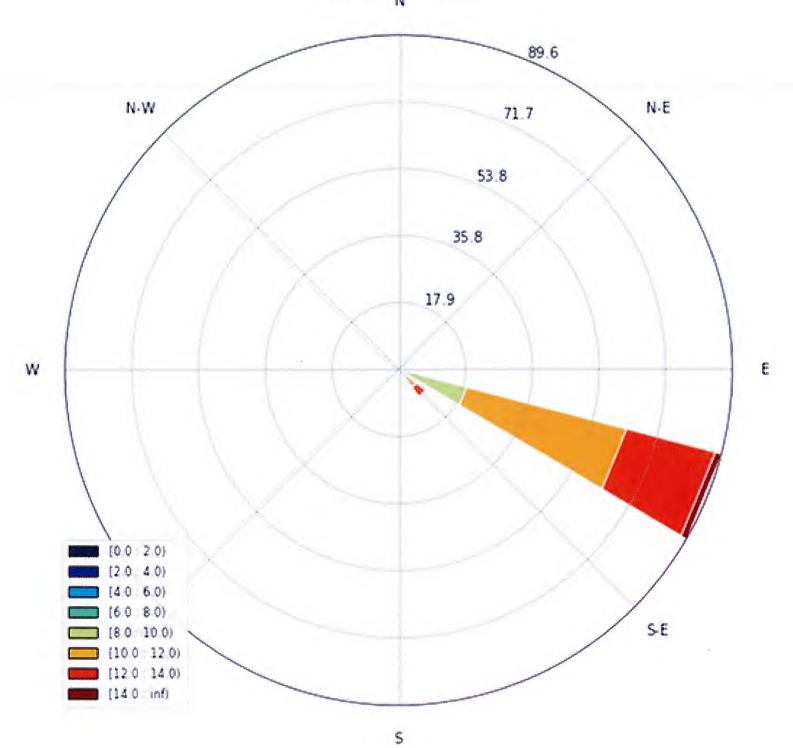
FPC: April 26 2019



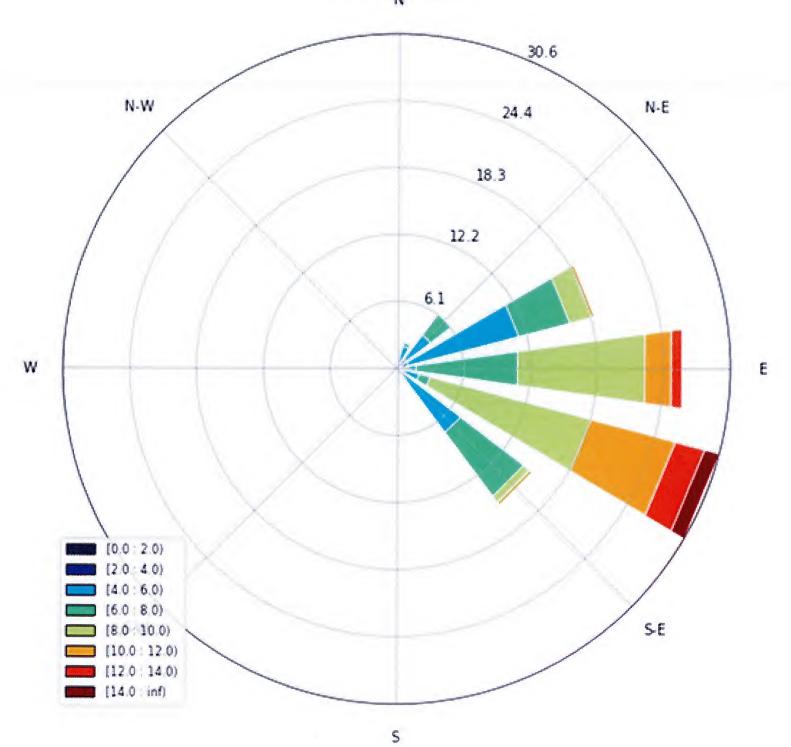
FPC: April 28 2019



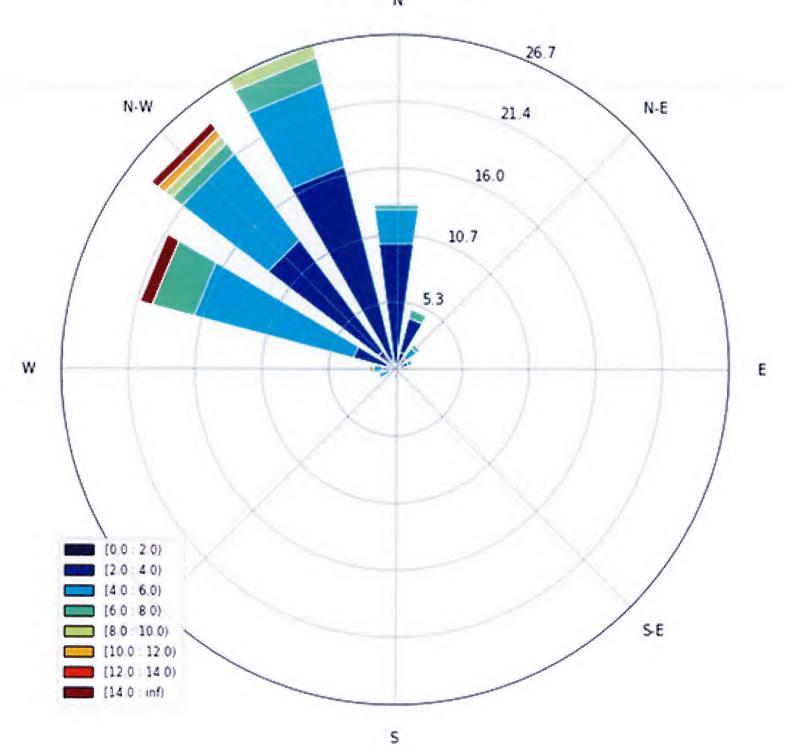
FPC: April 30 2019



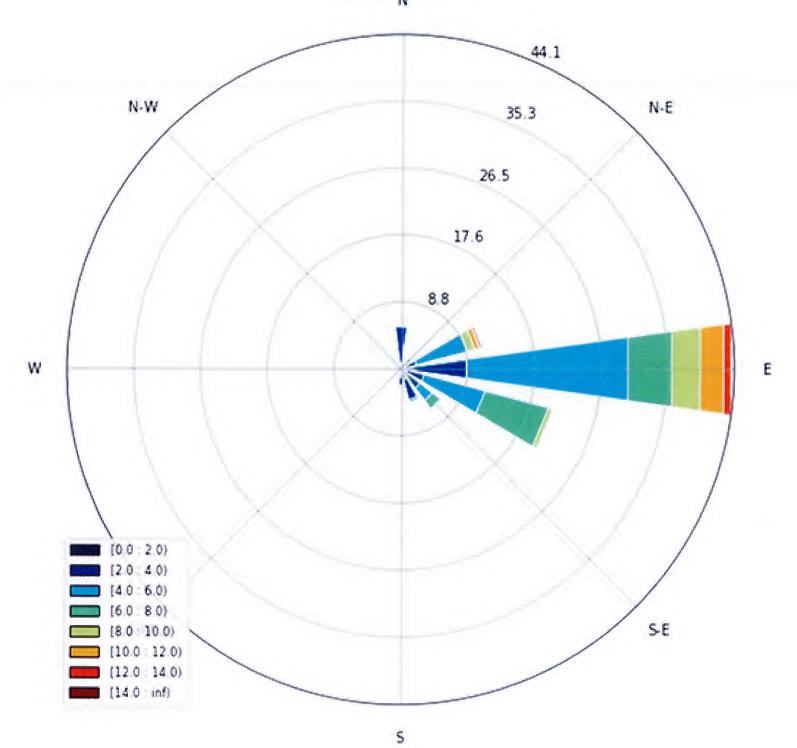
FPC: May 2 2019



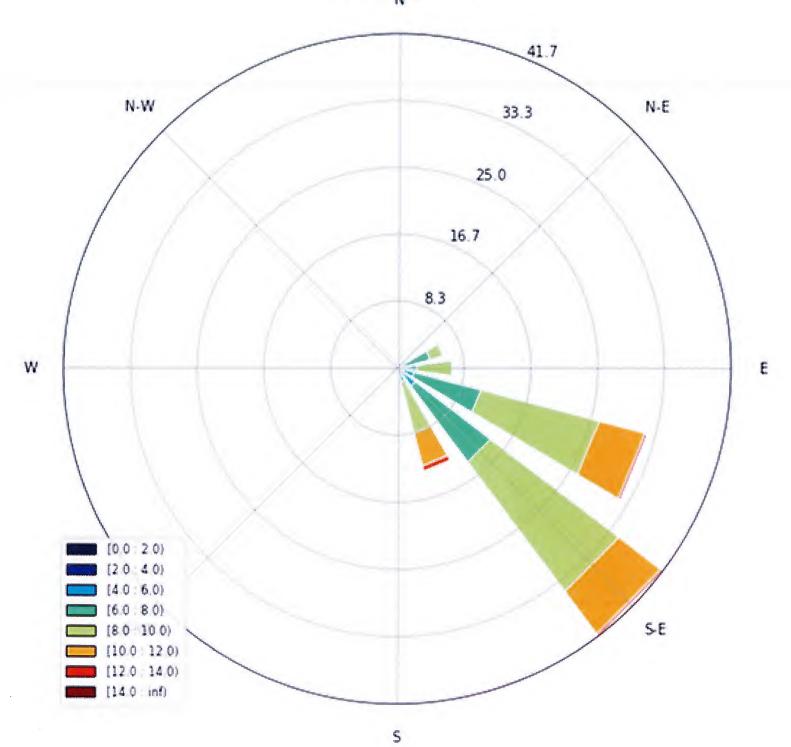
FPC: May 4 2019



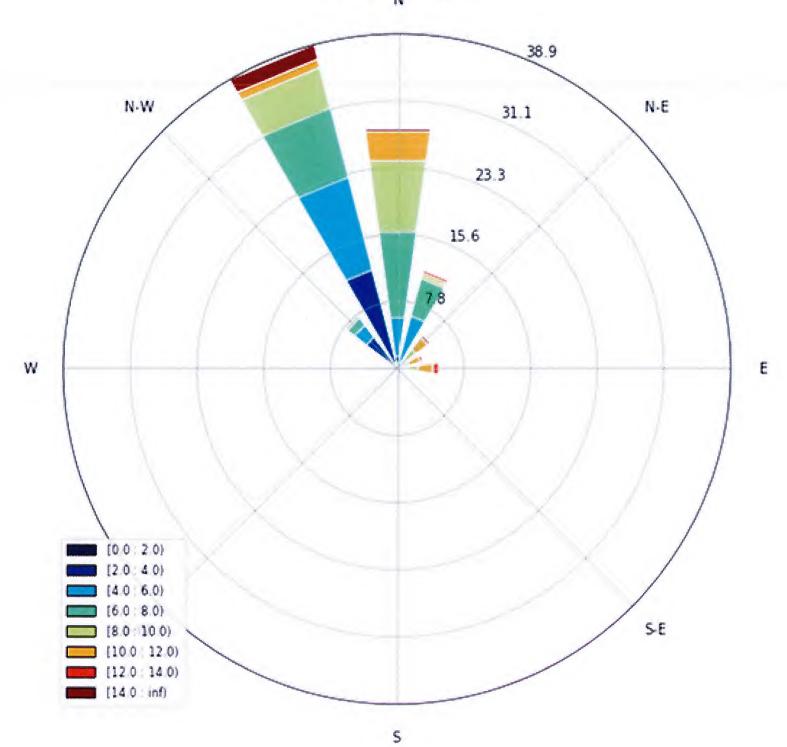
FPC: May 6 2019



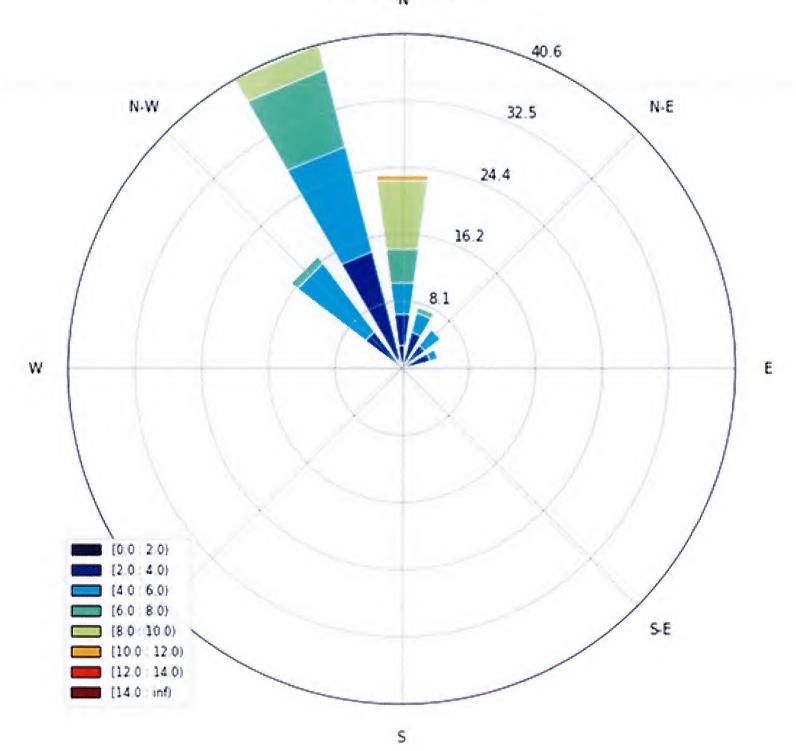
FPC: May 8 2019



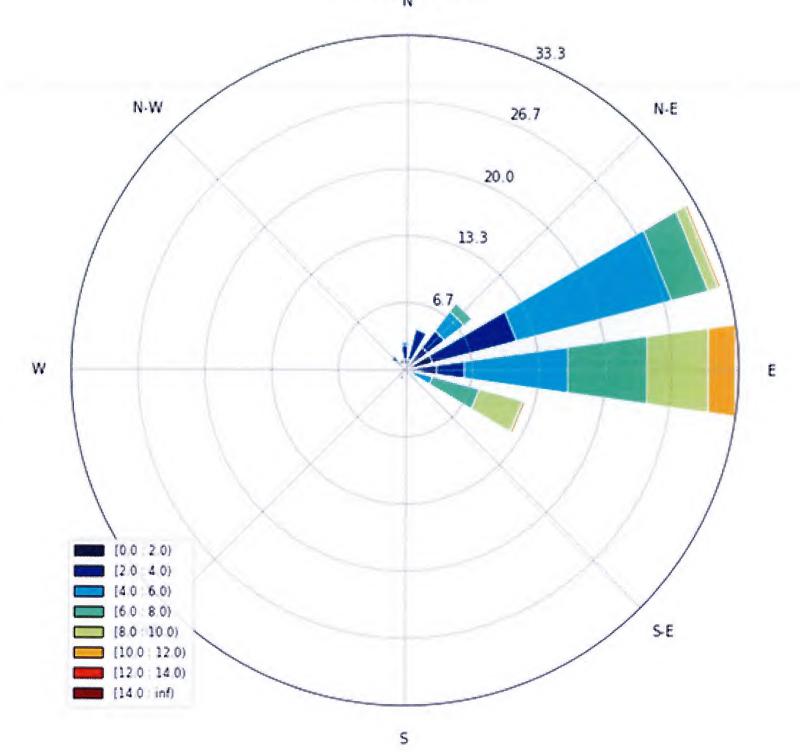
FPC: May 10 2019



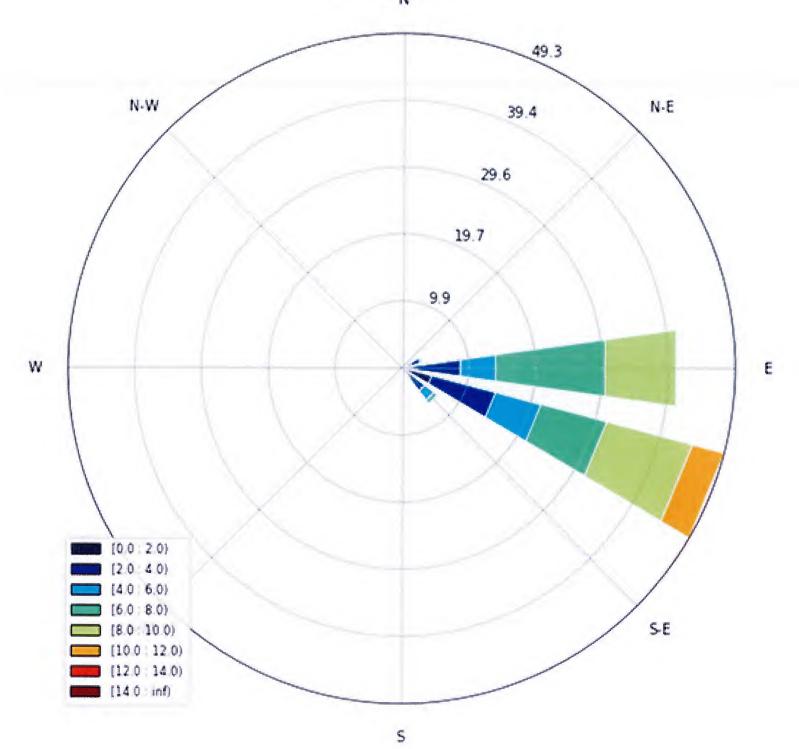
FPC: May 12 2019



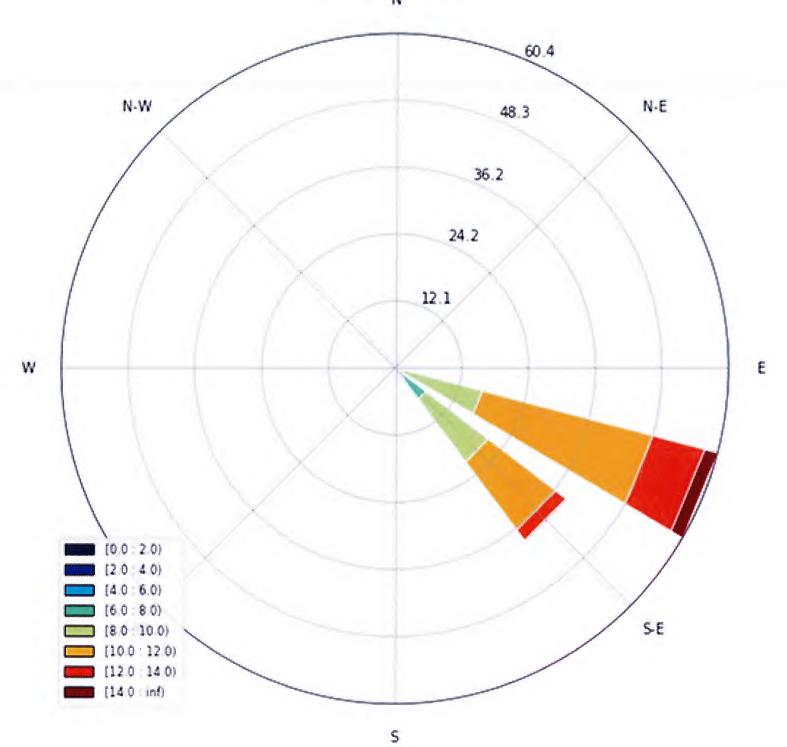
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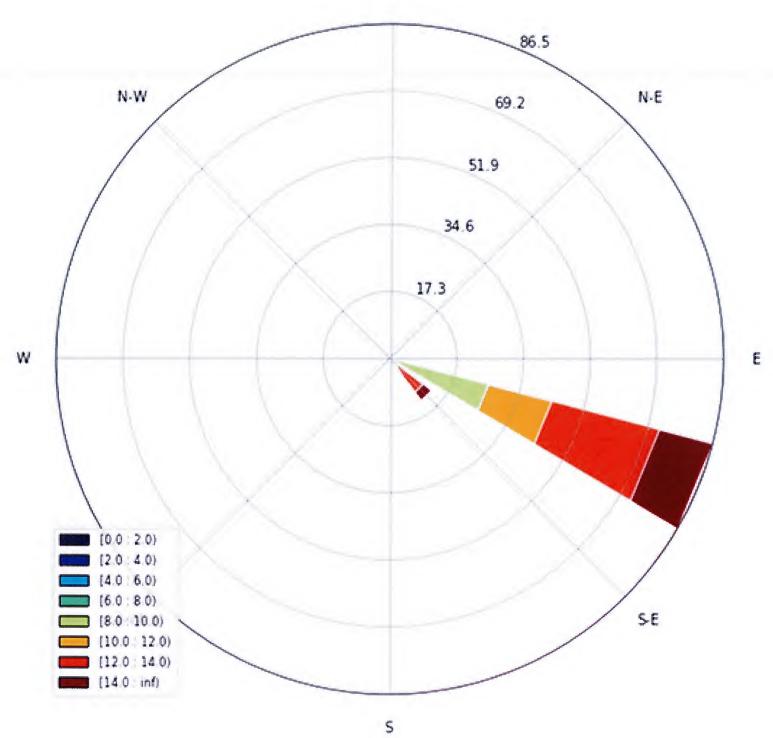
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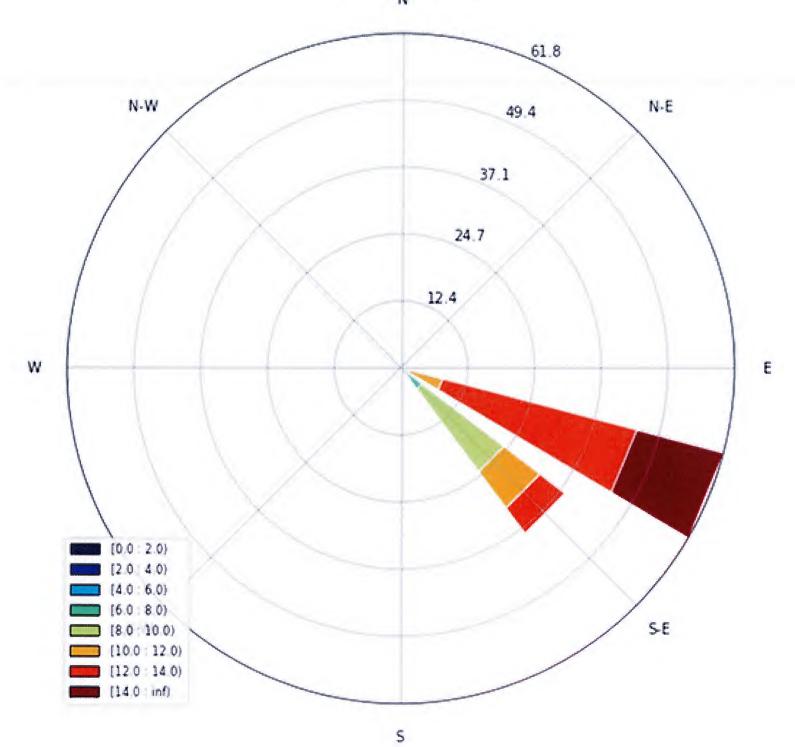
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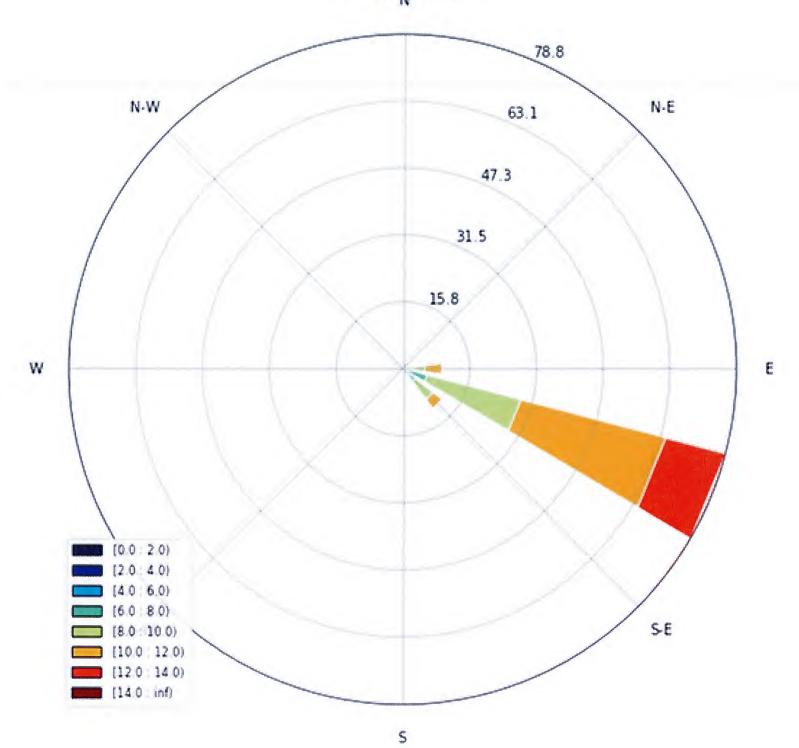
FPC: May 20 2019



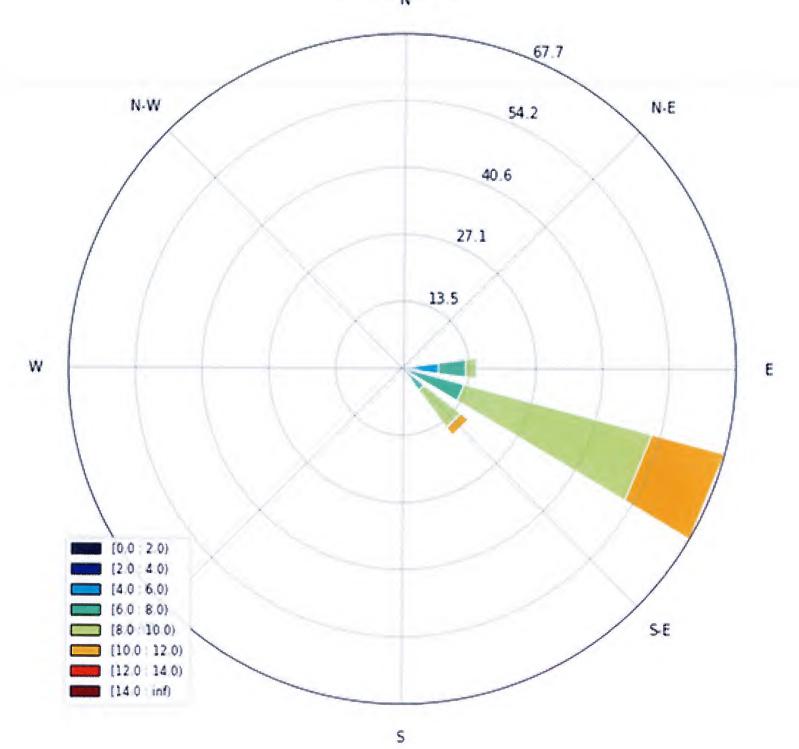
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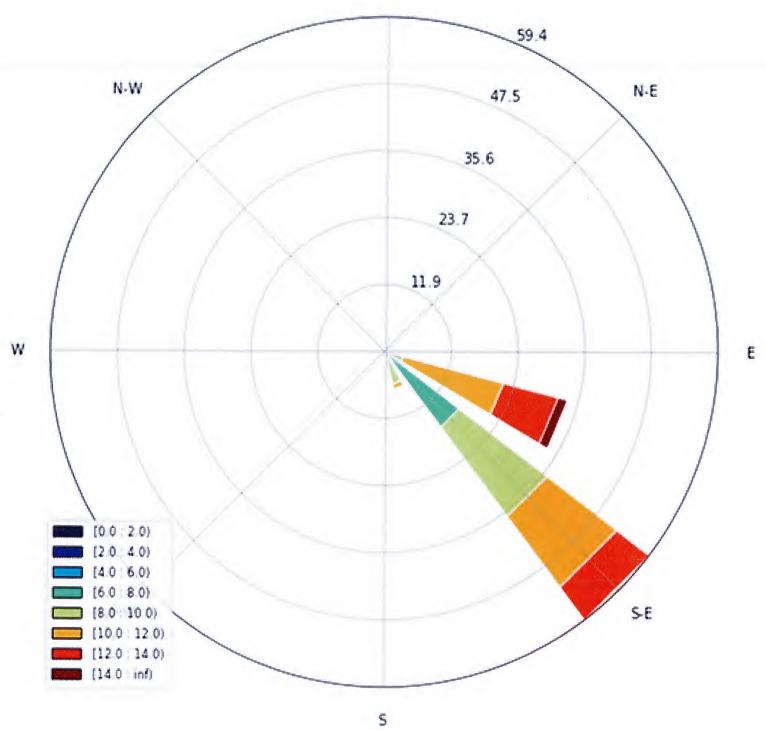
FPC: May 24 2019



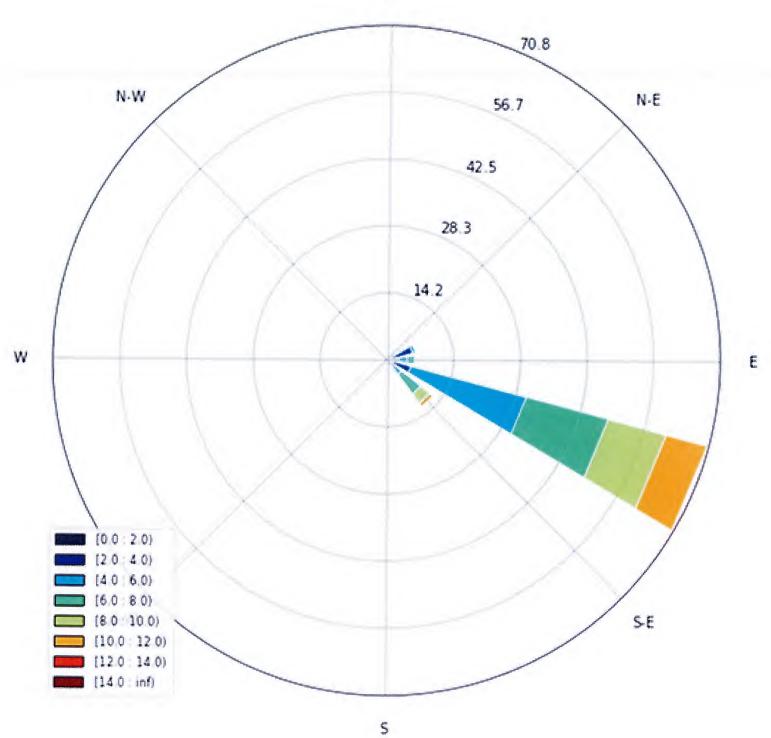
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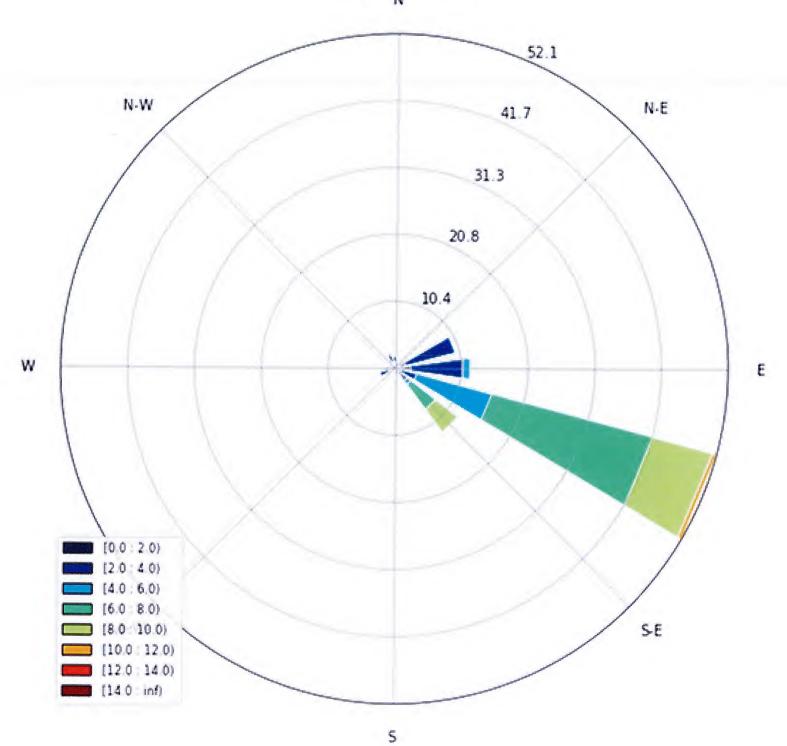
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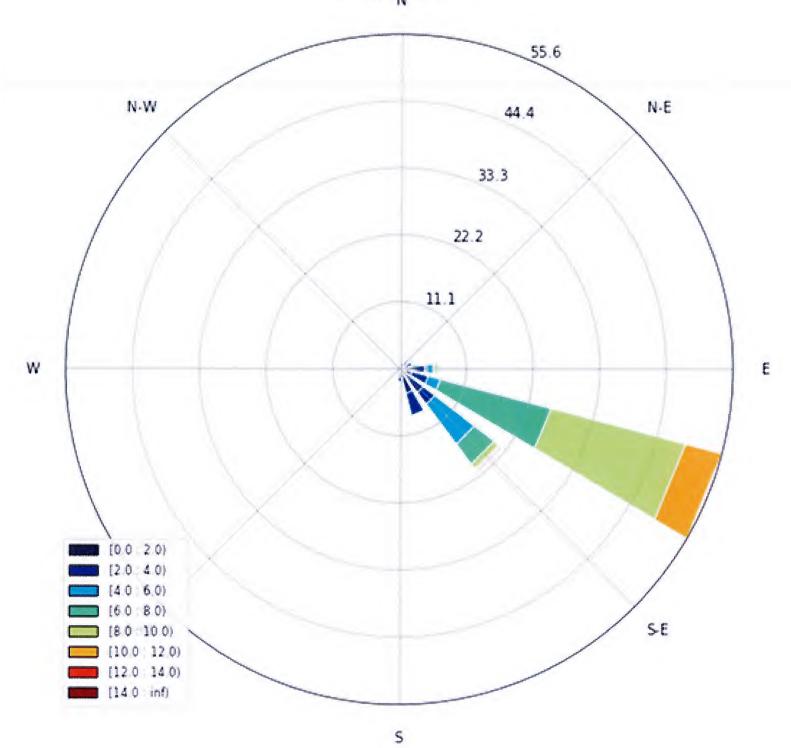
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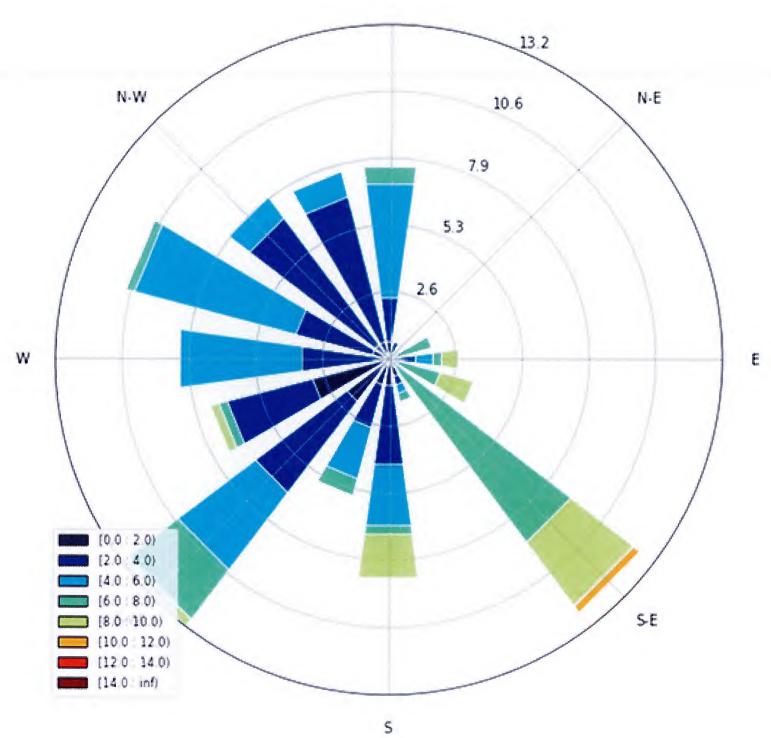
FPC: June 1 2019



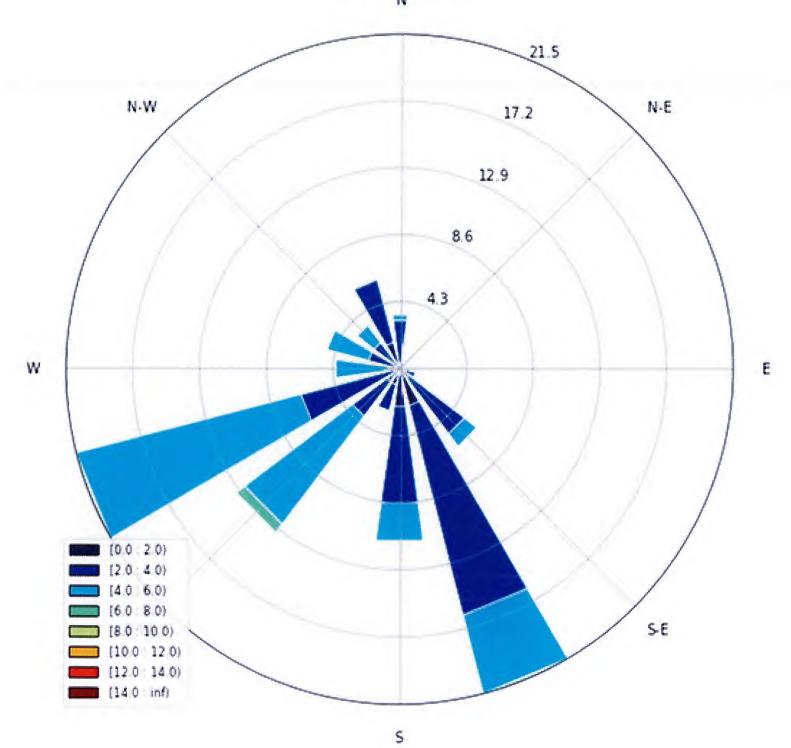
FPC: June 3 2019



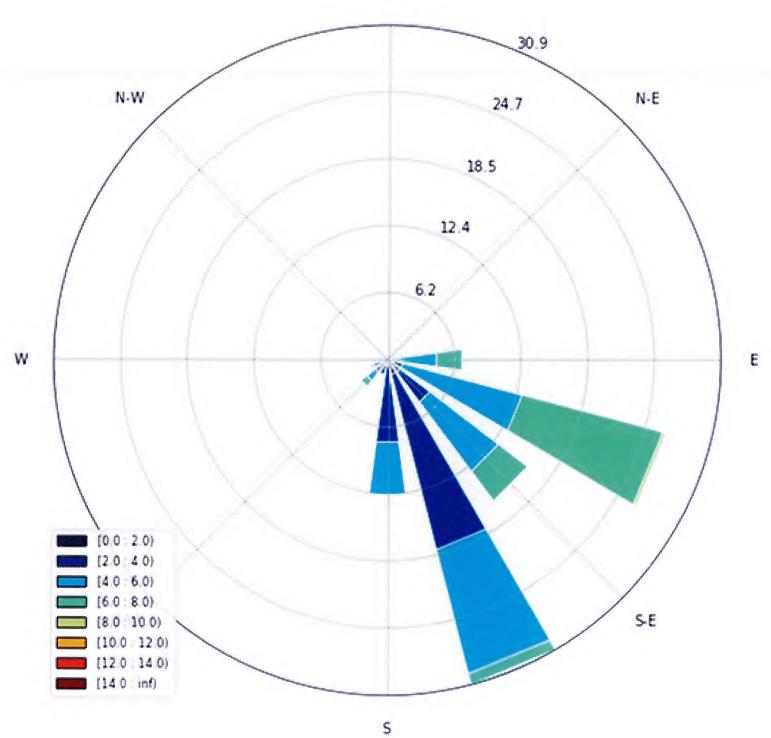
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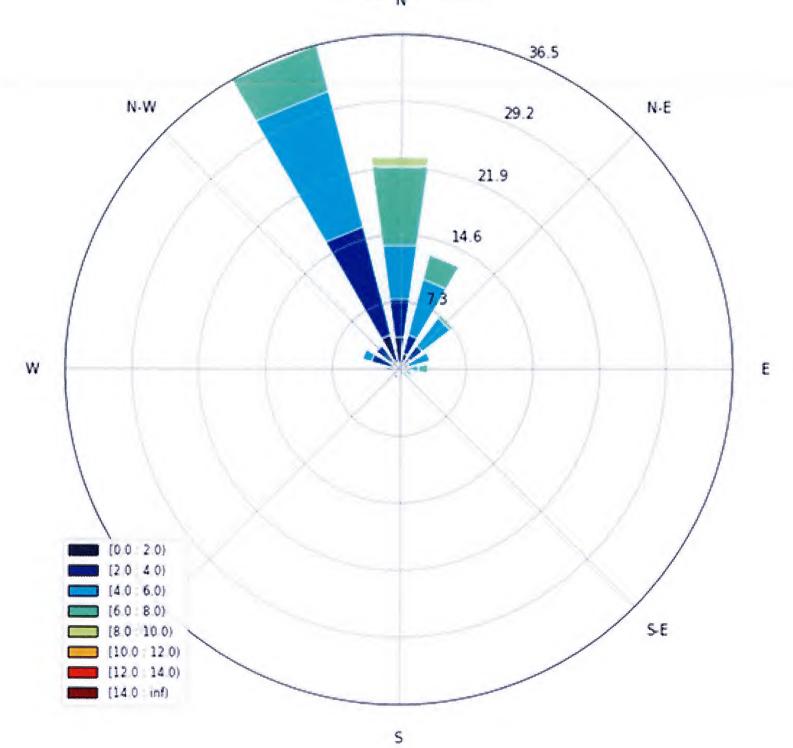
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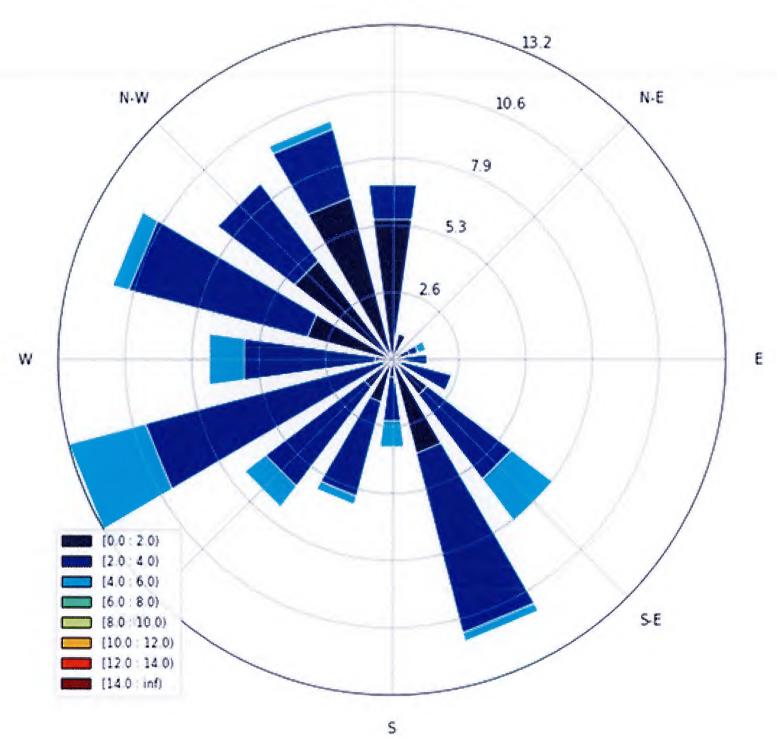
FPC: June 9 2019



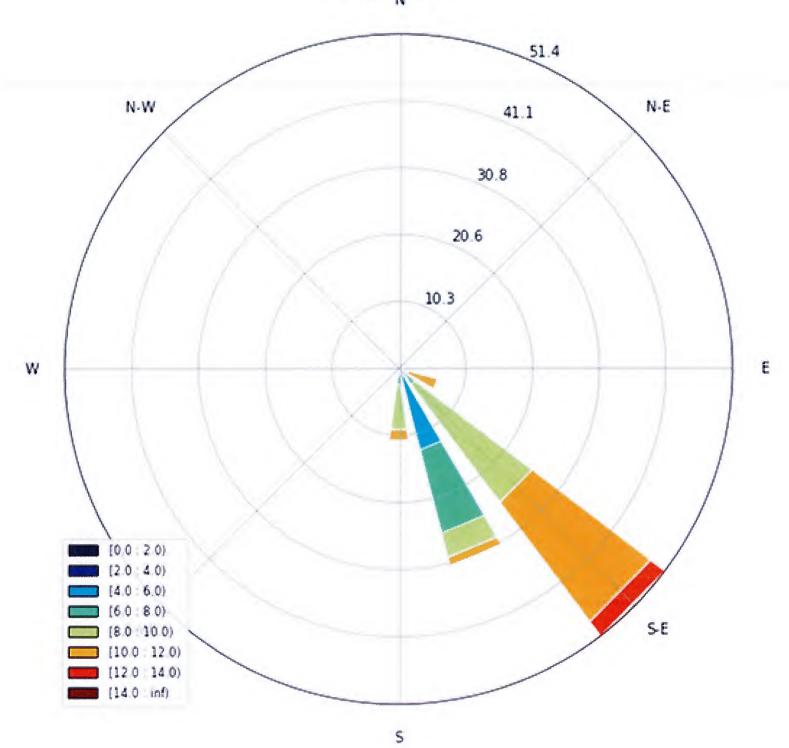
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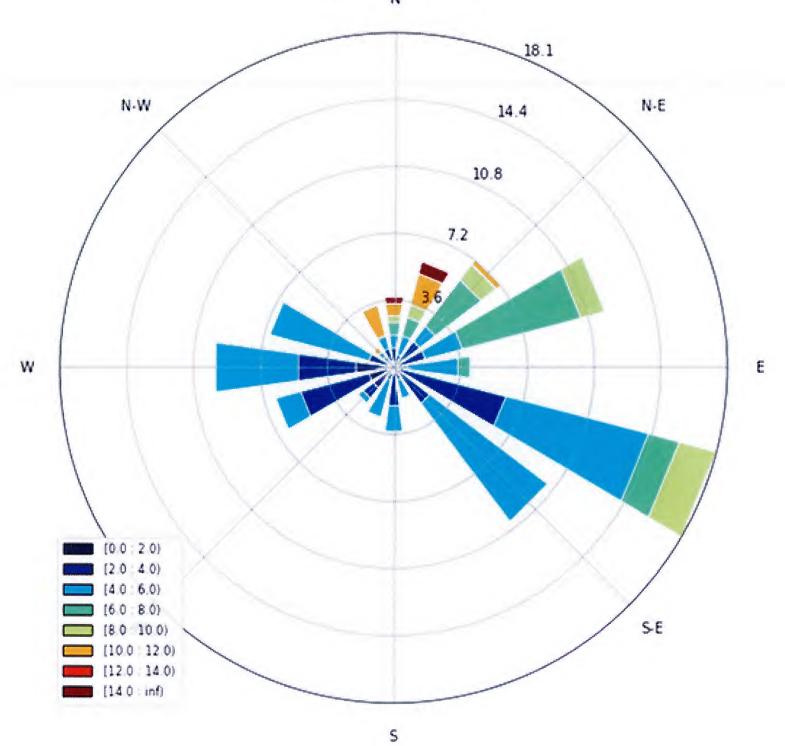
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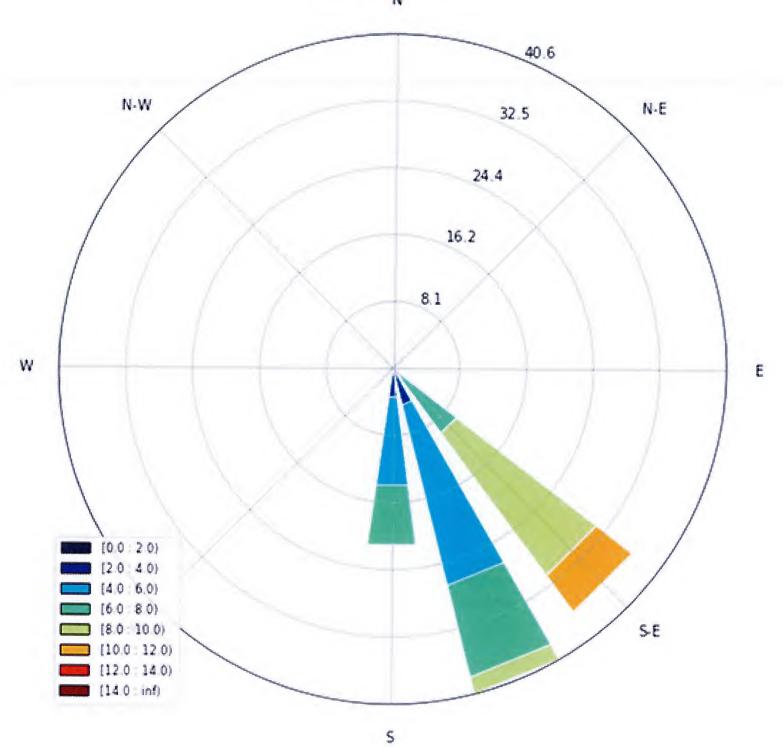
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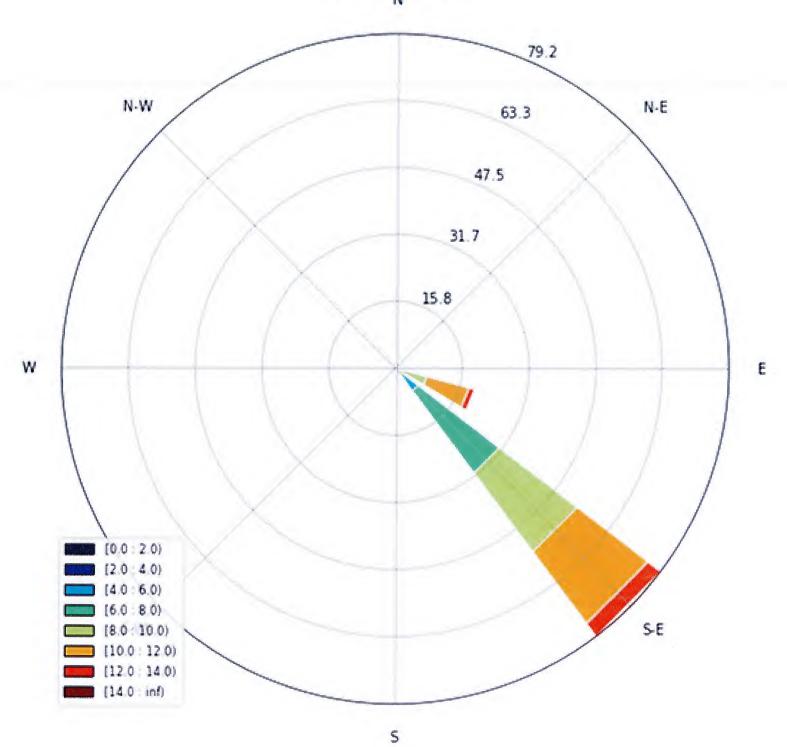
FPC: June 17 2019



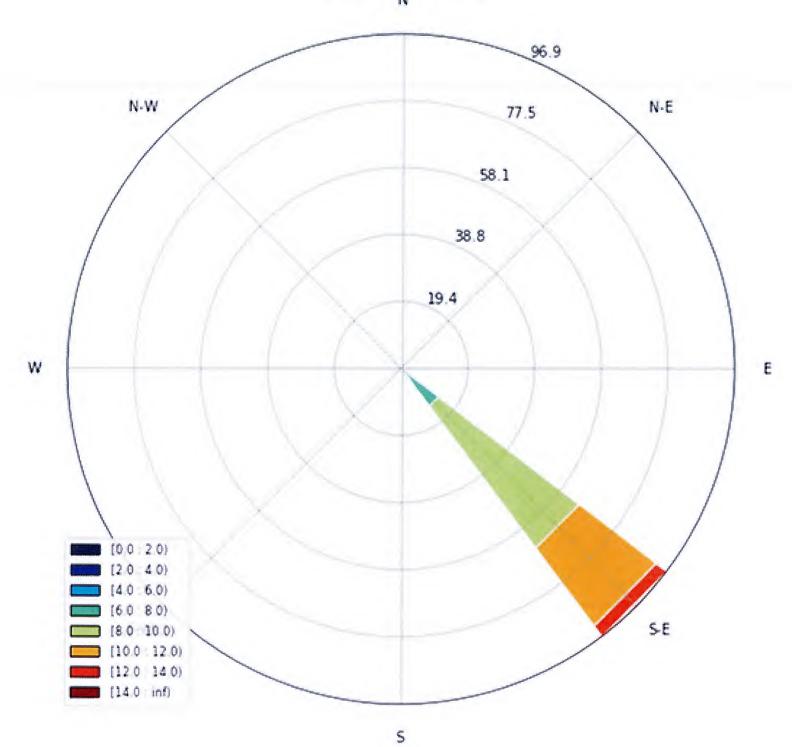
FPC: June 19 2019



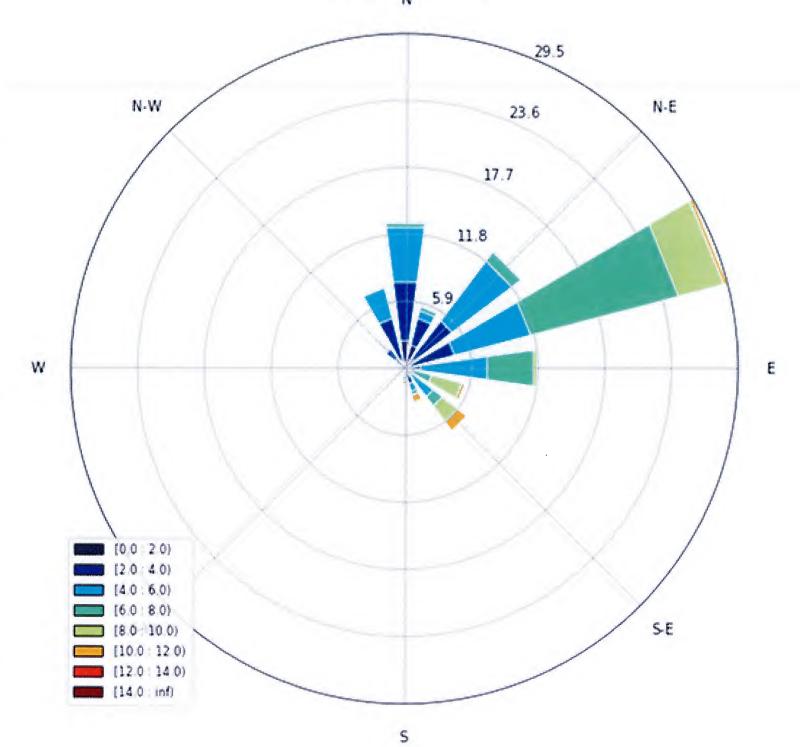
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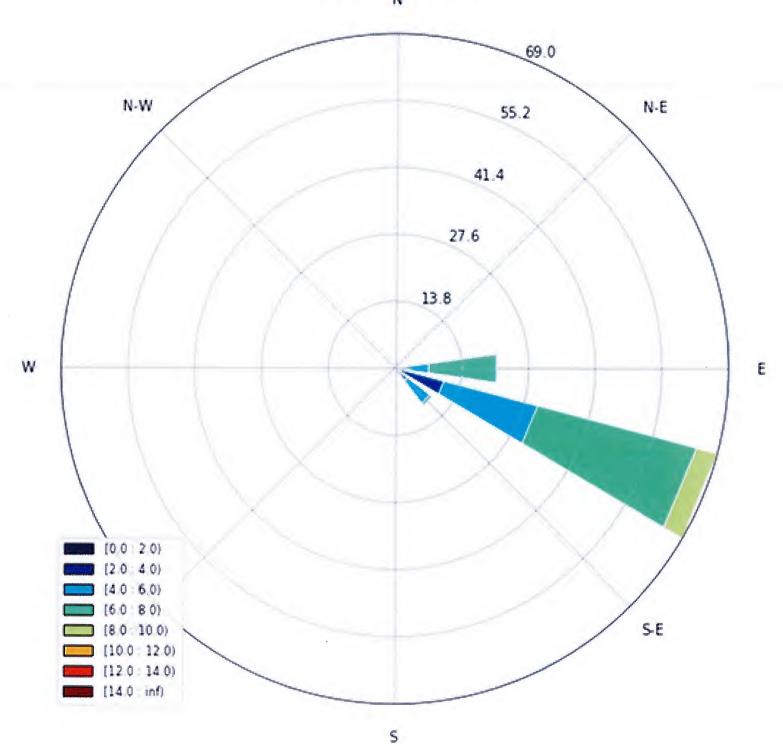
FPC: June 23 2019



FPC: June 25 2019



FPC: June 27 2019



FPC: June 29 2019

